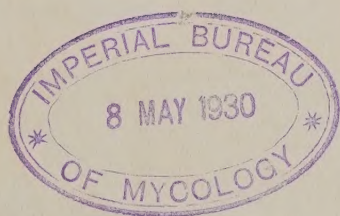


18/E



Fruit Export from Australia and New Zealand.

Over 2,500,000 cases will be shipped this season.

Owing to favorable season quality is excellent.

THE APPLE EXPORT TRADE from Australia and New Zealand is now on a good basis, and big developments can confidently be expected.

Experience extending over many years has demonstrated the varieties which are most suitable for export; also the districts where such fruit can best be grown.

The shipping companies are endeavouring in every way to give the best service possible, so that fruit shall be delivered in good condition at the port of discharge.

Commencing in a small way nearly 30 years ago, the export of Australian fruit has now assumed considerable proportions, indicative, we believe, of further extension in the near future.

Great Britain annually imports over £30,000,000 worth of fresh fruit, of which Australasia's share is about £1,300,000. In addition to fresh fruits, Australia sends large quantities of dried fruit, canned fruit and wine.

Whilst London is the main port, it is, nevertheless, true that a substantial and profitable trade is being built up in that Australasian consignors are making increasingly larger use of such ports as Hull, Liverpool, Manchester, Southampton and Glasgow.

Continental Markets.

Just prior to the war, an expanding trade was being built up in the export of fruit to Germany—and through Germany, to the other countries of Europe.



River boats loaded with Apples, arriving at Hobart (Tas.) from the Huon and Derwent Valley Districts.

Appreciative reference must be made to the work of the Cambridge scientists, who solved the problem of "brown heart" in Apples.

It is hoped that scientific research will be continued so that the export of Pears, Citrus and Grapes may be conducted with confidence.

The success which attended last season's export has greatly heartened growers who are going in for export with some of the enthusiasm which marked the pre-war period.

Export is viewed, not simply as a safety valve to get rid of the quantity above Australian requirements, but as a profitable investment—which it certainly should be.

This means increased activity all round. Better attention is being paid to manuring and spraying, and areas with export varieties will be planted.

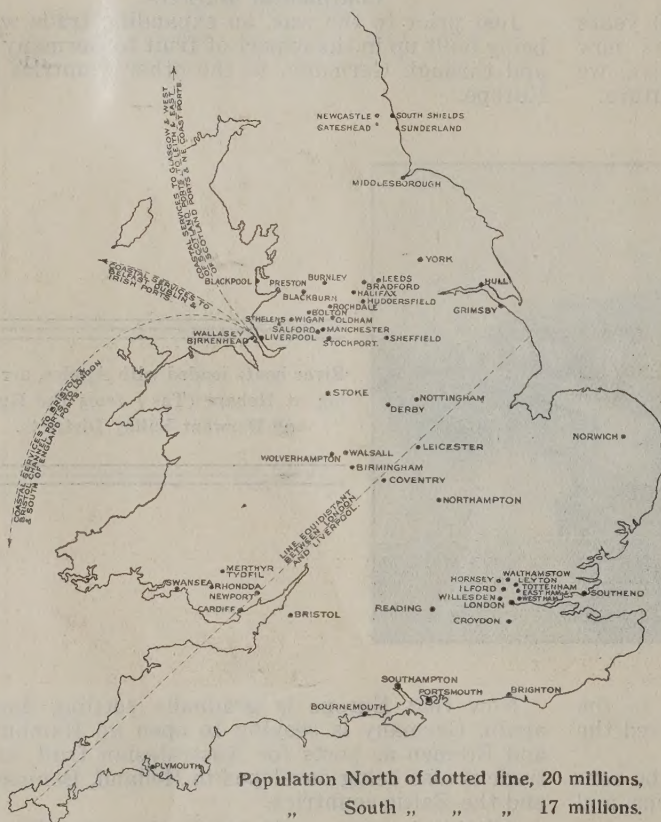
Now that Europe is gradually settling down again, Germany is seeking to open up Hamburg and Bremen as ports for Australasian fruit, and trade is also being developed in Holland, Denmark and the Baltic countries.

All this is good, as it means the extension of markets for our producers.

Some Interesting Figures.

The Apple is the principal fruit which has so far figured in Australian fresh fruit exports. Up to and including the 1913 season, the record quantity shipped in any one season from Australia was 1,500,000 bushels. Of that quantity a considerable proportion was re-shipped to the Continent, leaving probably 1,000,000 bushels for consumption in United Kingdom.

SHIP YOUR FRUIT TO LIVERPOOL



LIVERPOOL, the greatest market and distributing centre for the North and Midlands of Britain.

AUCTIONS are held throughout the year, on **Mondays, Wednesdays and Fridays**

Buyers attend these sales from all over the United Kingdom.

The Port contains every facility for **COLD STORAGE**, which amounts to **over 8,000,000 cubic feet.**

Rapid distribution for perishable produce is secured by means of the most modern rail and road transport.

Quantities of Fruit imported into Liverpool during the year ending 1st July, 1925—**457,034 tons.**

Members of the Liverpool Fruit Brokers' Association:

JAMES ADAM, SON & CO.

L. CONNOLLY & CO.

GOODWIN, SIMONS LTD.

WOODALL & CO.

J. C. HOUGHTON & CO.

MACGEORGE & JARDINE

ROGERS, WHITE & CO.

Ten years later—1923—the quantity had increased to approximately 2,250,000 bushels, and the re-exports to the continent were infinitesimal. The consumption in the United Kingdom thus increased 150 per cent., and the prices were considerably higher than the pre-war level.

The 1925 exports of Apples from the various States were:—

Tasmania	1,313,265	cases
Victoria	414,067	"
West Australia	337,916	"
South Australia	30,533	"
New South Wales	22,001	"
Total	2,117,782	"

The principal ports to which the fruit was sent were — London, 1,448,649 cases; Liverpool, 319,721; Hull, 233,319; Southampton, 14,219; Continent, 60,700; East, 49,643.

carried out packing classes both for seniors and for school children.

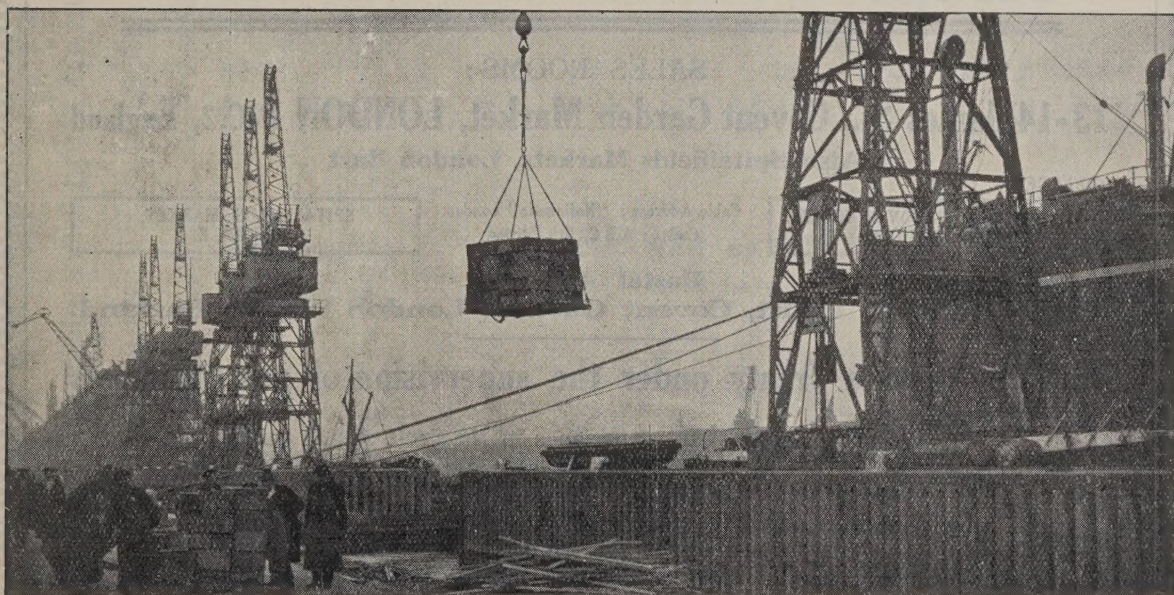
Generally speaking, the fruit trade in England favors the present Australian package, although the advantages of the Canadian and American bushel case made of softwood are advocated by some. The red jarrah case from Western Australia is distinctive and appreciated. The hardwood case from Tasmania is well spoken of.

Where softwood cases are used, wire bound, it gives an attractive appearance, which enhances the value of the fruit, and more than pays for the extra expense involved.

Advertising to Increase Fruit Consumption.

By means of a fund subscribed to by Australasian growers and the English fruit trade, a considerable amount of advertising has been possible to increase the consumption of fruit.

The food and medicinal qualities of fruit have been prominently brought before the British public, and the result of this valuable educational



Discharging Australian Apples at London, Eng.

In round figures it is estimated that in 1926 there will be shipped approximately a similar quantity to the 1925 total—possibly more, though totals from some of the States may vary according to the export crop available.

The programme of steamers, according to the latest information available is published on page 3.

Approximately 400,000 cases will be shipped from New Zealand.

Grading and Packing.

There has been progressive improvement in the grading and packing of fruit for export. Experienced growers who have been shipping for many years have learned the art of packing fruit to stand the long journey; credit must be given to the various Departments of Agriculture who have

work has been that the people have a wider knowledge of fruit, and have purchased same in increased quantities. The old idea that fruit is a luxury is being dispelled; the fact that fruit is a necessity to the human system, supplying vitamins and many nerve and tissue building essentials, has been effectively conveyed to the people to advantage. Further, there is an ever-increasing sentiment in favor of purchasing Dominion products.

The Season's Prospects.

Reports from other countries supplying fruit to England indicate that there should be a ready demand for Australasian fruit when it arrives on the English market; thus, growers and the trade generally, are looking forward to the coming season with confidence.

————— To the Orchardists of —————
AUSTRALIA — TASMANIA — NEW ZEALAND

Your

**APPLES,
ORANGES,
PEARS, etc.**

can be sold to advantage

--- BY ---

THOS. WALTON (LONDON) LTD.

SALES ROOMS:

13-14 James St., Covent Garden Market, LONDON W.C.2, England

Also Spitalfields Markets, London East

OFFICES—

**11, 12, 13, 14 HANOVER COURT
LONDON W.C.2**

**Cable Address: "Notlamots" London
Codes: A B C, 5th Edition**

**SPITALFIELDS MARKET,
LONDON, E.**

Postal Address:

11-14 Hanover Court, Covent Garden, London W.C.2, England.

Sales by Private Treaty under the supervision of our principals

We have had over 26 years experience in the fruit selling business, and with the aid of a capable staff have built up one of the most successful businesses in the Covent Garden Market.

Our large Warehouses in Hanover Court, enable us to sort and display your fruit to the best advantage, whilst our Salesrooms in 13, 14 James St., are in one of the finest positions in the Market.—Visited daily by the principal buyers of the United Kingdom and the Continent.

Our regular circle of buyers ensures for the grower a good and remunerative account sale.

Satisfaction to clients—Highest Prices and Prompt Returns are our specialities. We are prepared to advance sufficient to cover freight and other incidental expenses.

Agents: **F. CAVE & CO.**

42 WILLIAM STREET, WESTERN MARKETS, MELBOURNE, VICTORIA

List of Steamers for the Carriage of Apples to Europe from Melbourne during the 1926 Season.

Ship.	Line.	Leave Sydney.	Leave Hobart.	Leave Melb.	Leave Adelaide.	Leave Albany.	Leave F'mantle.	Destination.
Maloja	P & O.	Feb. 9	Feb. 13	Feb. 16	Feb. 18		Feb. 22	London
Largs Bay	C'wealth Govt.	" 9	" 13	" 17	" 20		" 25	Hull, London
Northumberland	Federal			" 18	" 23			London, Antwerp, Hamburg, Manchester, L'pool.
Euripides	Aberdeen			25				Liverpool
Ascanius	Blue Funnel	19	Feb. 23	" 27				Liverpool
Cathay	P. & O.	" 23	Feb. 27	Mar. 2	Mar. 4	Mar. 6	Mar. 8	London
Port Caroline	Com. & Dom'on.	" 23					" 9	London & H'burg.
Blue Funnel	Com. & Dom'on.	" 27	Mar. 9		13			Hull, London
Asphalion	Com. & Dom'on.	" 27	6					Southampton & London & Hull
Port Brisbane	Com. & Dom'on.		L'ceston 9					Hull, Hamburg
Delphic	White Star			6			15	London
Westfalen	N.D.L.	Mar. 2	Mar. 13	" 6	" 11	Mar. 23		Hull, Hamburg
Oronsay	Orient	3	" 6	" 9	" 17			London
Bendigo	P. & O., Branch	" 3	" 8	" 12	" 17			London
Opawa	Aberdeen			" 13				Hull, Hamburg
Horatius	P. & O.	9	" 13	" 16	" 19		Mar. 22	London
Naldera	C'wealth Govt.	" 9	" 13	" 17	" 20		" 25	Hull, London
Esperance Bay	Com. & Dom'on.	" 9	" 11	" 18			" 27	Southampton & Hull & London
Port Kembla	Com. & Dom'on.		L'ceston 13					Hull & London
Abbekirk	Holland			20			29	Hull, Hamburg
Osterley	Orient	17	" 20	" 23	" 28		Apr. 6	London
Cornwall	Federal			" 24	" 28			London, Manchester, Liverpool
Ballarat	P. & O., Branch	17	" 22	25		Apr. 3	Apr. 5	London
Comorin	P. & O.	23	" 27	" 30	Apr. 1			London
Nestor	Blue Funnel	1	" 6	Apr. 10	" 14	Apr. 15		Liverpool
Fordsdale	C'wealth Govt.	3		" 7	" 10			Hull & London
Bairnald	P. & O., Branch			" 8				London
Sophocles	Aberdeen	3	14	" 9				Liverpool, Lond.
Wittel	N.D.L.	" 6	" 10	" 13	15		19	Hamburg
P. & O.	P. & O.	" 7	" 10	" 14	" 17		" 22	London
Narkunda	C'wealth Govt.	" 14	" 17	" 20	" 22		" 26	Hull & London
Moreton Bay	Orient		7	" 22	" 26			London
Otranto	Com. & Dom'on.		L'ceston 10					Southampton & Hull
Port Darwin	Com. & Dom'on.			" 27	" 29		May 3	London
Moldavia	P. & O.	20	" 24	" 27	" 29		" 8	London
Berrina	P. & O., Branch	" 21	" 26	" 29	" 3		" 10	London
Orama	Orient	" 28	May 1	May 4	May 6	May 13		London
Barrabool	P. & O., Branch	" 28	" 3	" 5	" 8			Hull & London
Ferrandale	C'wealth Govt.	1	8	" 12	" 15		" 20	London
Jervis Bay	C'wealth Govt.	" 4	" 11	" 15	" 19			Liverpool
Aeneas	Blue Funnel	" 7	" 18	" 22	" 26			Liverpool
Anchises	Blue Funnel	" 14	" 18	" 22	" 26			London
Hobson's Bay	C'wealth Govt.	" 25	" 29	" 3	June 5		June 10	London

RIDLEY & HOULDING

Covent Garden Market

London, England

Importers of
AUSTRALIAN APPLES AND PEARS

WE have been connected with
the Australasian Apple and
Pear Trade for over twenty years.

Consignments receive personal at-
tention. Our representatives will be
pleased to arrange for the forward-
ing of consignments to our house

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Fruit and Mercantile Co.
(A. S. HARRISON)
410 Flinders Lane, Melbourne

TASMANIA:

Messrs. Murdoch Bros.
Hobart

Cable Address:

"BOTANIZING"
RAND LONDON

Telegraphic Codes:

A B C, 4th, 5th, 6th Edition
Bentley's Modern Economy
Western Union

SHIP YOUR FRUIT

TO THE FIRM OF

BRADNUM

An old-established and reliable firm, whose business has grown to large dimensions by recommendation from one grower to another, and who can be depended upon to do their best in the interests of the grower.

JAS. BRADNUM at Covent Garden, London,
and at Liverpool and Southampton

E. & H. BRADNUM, at Hull.

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With additional Selling Agencies at Glasgow, Stockholm, Oslo, Gothenburg, Rotterdam & elsewhere

FULL ENQUIRIES ARE INVITED BY

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506 Little Collins St., Melbourne

Representative for
Victoria, South Australia and New South Wales

JOHNSTONE & BENNETT Pty. Ltd.

27 ARGYLE STREET HOBART

Solicit Consignments of Tasmanian Fruit

FOR

Edward Jacobs & Sons

== **Covent Garden Market, London** ==

The high standing and long experience of this old-established firm, extending over a period of 105 years, and having also been in the Australasian fruit business ever since its inception, is sufficient guarantee to growers that all fruit entrusted to their care will return the highest market values, together with prompt settlements.

Their average for Tasmanian Apples throughout the last season was

PER **15/-** CASE

This includes all apples delivered in plundered or damaged condition.

Shipping No. 418.

Keep your Orchard Clean with **SPRAYOL**



OBTAINABLE AT ALL STORES

Made in Australia
by

JOHN FELL & CO. LTD

HEAD
OFFICE **SYDNEY**

Branches:- All States.

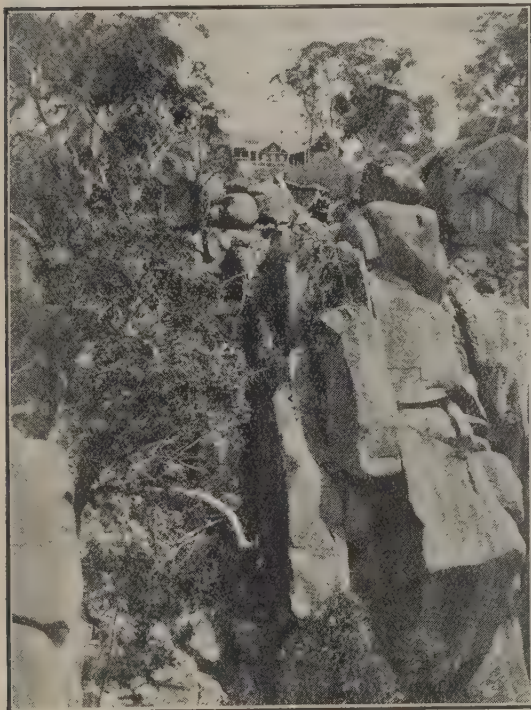
GIVE YOURSELF A SPELL

You have had a busy year. Your fruit block needs constant care and attention, and it entails much hard work.

SEE
AUSTRALIA
FIRST

You have earned a holiday, so get away to
MT. BUFFALO
Get out of the Old Environment and into the New.

START
WITH
VICTORIA



The Chalet.



Eurobin Falls.

Scenic wonders which you will surely appreciate. Those who have already seen them have been led to exclaim, "Why, I never knew there was such a wonderful place in Victoria."

During Spring and Summer the climate is delightful — balmy days and cool refreshing nights. You may walk, fish, play tennis, boat on the lake, climb the heights, explore the untrodden areas of the vast and wonderful plateau, or you may just laze away the hours on the spacious verandah feasting your eyes on the glories of the extensive panorama. Added to all this is the special service—Buffalo service—for which the Government Chalet has won such an excellent reputation. This is a reputation of which the staff is proud, and they are anxious to maintain it.

The Chalet is replete with every modern convenience. Every room is heated, the table is exquisite, the cuisine of the best, and the service and appointments are par excellence.

All these are available at reasonable rates. You may travel to Mount Buffalo by our comfortable trains and motor service, including the handsome motor sedan.

SEE MT. BUFFALO Information and Literature Free. **THE RAILWAY IS THE BEST WAY**

Enquire at the Government Tourist Bureau, Queen's Walk, Opposite Town Hall, Melbourne

"Elephant"

STILL ON TOP!!

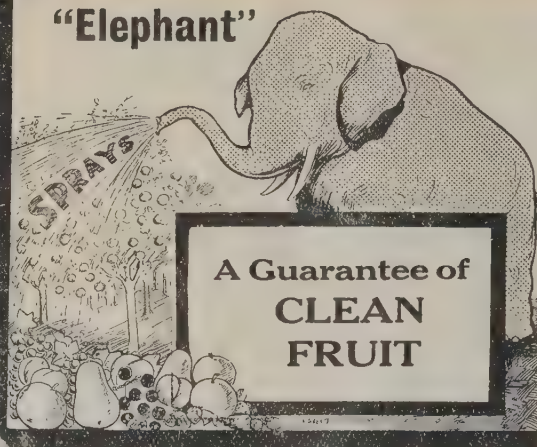
ORCHARDISTS

should use only the best Fruit Sprays,
therefore ask for and see that you

GET

"Elephant" Brand

NOW IS THE TIME TO USE:—



ARSENATE OF LEAD (PASTE & POWDER)

IF NOT SUPPLIED, PLACE YOUR ORDER NOW.

To obtain the best results it is necessary to spray thoroughly and frequently with Arsenate of Lead. This takes up considerable time, and is costly. It is therefore all the more necessary to use the Best Brand obtainable. To be sure of this, see that you use **"ELEPHANT" BRAND**, which has been proved to be not only the most reliable on the Australian market for many years, but the Highest Grade of Arsenate of Lead still obtainable.

Since the Wonderfully fine **"ELEPHANT" BRAND ARSENATE OF LEAD** came on the market years ago, numerous tests carried out by the various Government Agricultural Departments invariably show that this Brand stands alone. No other brand has shown consistently the very high qualities of **"ELEPHANT" Brand**. The figures published below speak for themselves,

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In 1921 **"ELEPHANT" BRAND ARSENATE OF LEAD** had the wonderful suspension of 89.35% (Jan. Journal), whilst in 1922 the Percentage was 52.4% (Mar., 1923, Journal), and in 1923 the percentage was 82.2%. (This was the last published in Dec. Journal). In each case **"ELEPHANT"** came out easily on top. Therefore we have not yet been beaten for suspension, and it should also be noted that the percentage of killing property in our Arsenate of Lead is particularly high.

Also buy "Elephant" Brand Spreader, Atomic Sulphur, Lime Sulphur, Bordeaux, Weed Killer, Prepared Red Oil, Sulphur, Black Leaf 40, Bluestone, Etc.

Write for a copy of the marvellous Government tests.

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"FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of each Month.

Editorial and Management Notices.

Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printer's MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked "Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

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The annual subscription, post free within Australia and New Zealand, is 8/6. All other places, 10/6, post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

Advertisements.

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States, as set out below.

Changes of copy for advertisements must be in our hands on or before the 17th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

"The Fruit World" Offices (where copies and full particulars are obtainable) are as follows:—

VICTORIA—9 Queen Street, Melbourne

NEW SOUTH WALES—8 Bridge St., Sydney (J. H. Coghill, Mgr.)

South Australia: W. F. McConnell, Grenfell Buildings, Grenfell Street, Adelaide. **Tasmania:** Saunders & Co., Murray Street, Hobart. **Western Australia:** D. L. Hetherington, Colonial Mutual Buildings, St. George's Terrace, Perth. **Queensland:** Gordon & Gotch Ltd., Queen Street, Brisbane. **New Zealand:** Gordon & Gotch Ltd., Wellington, Dunedin and Auckland. **Great Britain:** Harvey H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

R. E. BOARDMAN, A.F.I.A., Managing Director and Editor.

E. H. WRAGG, Secretary and Advertising Manager.

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Thinning of Pome Fruit.**The Benefit to Varieties of Apples and Pears.**

THE PRACTICE OF THINNING merits the attention of all growers of pomiferous fruit. There are some commercial varieties which require thinning only under exceptional circumstances, but there are some, such as Yates, Rokewood, and others which bear their fruit in clusters, and which greatly benefit if thinned judiciously (states the N.S.W. Department of Agriculture).

The thinning should be done after the fruit has set well, and after natural thinning has taken place. When thinning it is important to see that fruit is well spaced, and that the best and biggest fruits are left on the tree. Any fruit showing bad blemishes or malformation should be removed.

The principal advantages of thinning are as follows:—

1. It lightens the overloaded tree.
2. It gets rid of ill-formed and blemished fruit, to the advantage of the better specimens.
3. It assists in securing more regular crops of marketable fruit.
4. It increases the efficacy of spray application, for when fruits are in large clusters it is more difficult to secure effective coatings of fungicides for black spot, or of insecticides such as arsenate of lead for codlin moth over the Apple.

It is hardly necessary to say that Pears such as Winter Cole and Beurre de Capiaumont should be treated similarly to the Apples.

It is also beneficial to go over any young trees which have developed limbs too weak to carry a crop, and pull off any fruit which such limbs will be unable to carry, and the breaking down of which will destroy the symmetry of the tree.

In many cases young trees, particularly when they have not been headed back hard on the leaders during the winter, carry fruit on the extremities of the limbs, and in such cases (especially when the leaders are weak), a few Apples will cause a limb to break or twist or retard the growth of the tree. Thinning obviates this undesirable result.

The value of thinning to the tree in this and in other cases more than sets off the loss incurred by the operation. Even on trees which have come into bearing, although the lower part of the framework is strong enough to carry a good crop, the tops of the leaders may be weak and a good deal of breaking may take place if the limbs are not relieved of some of the fruit. In this case also thinning justifies itself.

IRRIGATED FRUITGROWING.**Mr. W. H. Everard, M.L.A., Appreciates Northern Victorian Citrus Areas.**

Mr. W. H. Everard, M.L.A., who represents a Victorian fruitgrowing constituency, and who takes a keen interest in all matters relative to the fruit industry, recently paid a visit, in company with Mr. H. Angus, M.L.A., to several northern Victorian irrigation and fruitgrowing districts.

Mr. Everard states that the improvements during the last 16 years are astounding, and even yet he understands that the irrigation development is still in its infancy, and during the next decade general additional improvements will have been made.

The settlements visited include Swan Hill, Riverside, Kangaroo Lake, Myall, Kerang and Tresco, and thereabouts. In fruitgrowing, citrus was noted to be the main production; on the whole, growers seemed satisfied with the result of their year's returns, although some of the citrus orchards have not yet come into their full yielding condition.

At Tresco some of the orchards appeared to be suffering from seepage; this, Mr. Everard believes is largely due to overwatering; he noted successful as well as unsuccessful orchardists, and states that in this branch of primary production, as in every other, there are men who do their work thoroughly, and those who fail to do so; the former make a success, whereas the latter are failures.

At Riverside, Mr. Everard was particularly interested in the orchard of Mr. Cox, who is a citrus grower; he was struck with the up-to-date methods of this grower; during the season just concluded 4,000 cases of citrus fruits had been marketed. Mr. Cox's home has every modern improvement, and is one of the most attractive in the north. Mr. Cox, as well as other growers thereabouts, is hopeful regarding the development of the export trade in citrus; growers are looking forward to the development of scientific research, which will make citrus export still more profitable.

Mr. Everard expressed appreciation of the development of these districts, not forgetting the beauty of the lakes—Reedy Lake, Lake Boga, etc. He also expressed his appreciation of the cordial manner in which he was received by the fruitgrowers.

Somerville Show.—The Annual Show of the Somerville Fruitgrowers' Association will be held on March 17th next, not the 19th, as previously announced.

Bunchy Top in Bananas.

A Virus Disease Transmitted by Aphis.

(Continued from Page 522, December Issue)

History of the Present Investigation.

The Investigation Committee, consisting of Professor E. J. Goddard (Supervisor), Mr. C. J. Magee, B.Sc., Agr. (Assistant Plant Pathologist), and Mr. H. Collard (Horticulturist), undertook the responsibilities of the investigation of Bunchy Top in May, 1924, on the recommendation of a commission which represented the Commonwealth Government and the New South Wales and Queensland Governments.

A considerable amount of work had previously been devoted to the problem by scientific workers in Australia as well as in Fiji—where the disease had been present for practically forty years—Philippines, Ceylon and Egypt, but no definite cause could be proved. Certainly it had been suggested by some that the disease was caused by eel-worms—in Fiji, Philippines, Queensland and Egypt—while various others had suggested that the causal agent was a fungus, chemical deficiency of the soil, deterioration of the Banana stock, climatic factors, aphids, etc.

There was no substantive evidence to strengthen the claims of these opinions, and as the ravages of the disease along the Northern Rivers of New South Wales and in South-eastern Queensland were so intense, it became clear that any attempt to solve the problem would have to be made by scientific investigators working on the spot. Only in this way would it be possible to determine the actual cause. The Investigation Committee determined to keep the question quite open and to refuse to eliminate any suggested probability or to refuse to consider any probable cause which might arise, unless conclusive evidence compelled.

Work at Tweed Heads.

A laboratory was founded at Tweed Heads, and experimental plots were leased at Cobaki from Messrs. T. Pilgrim and McAlister. The investigation work at the laboratory was attended to by Mr. C. J. Magee, and the horticultural work at the plots were under the care of Mr. H. Collard. In the interval, awaiting the planting season, Mr. Collard was sent to Fiji, to gather first-hand information as to the history of the disease in those islands, its present status, and the possibility of securing resistant or immune stock.

Attempts to isolate

any constant fungal or bacterial agent from the various parts of affected plants were unsuccessful, and after a period of six months, during which visits were constantly made to various parts of the affected area, noting the behaviour of plants in deserted plantations as well as the initial and early stages of infestation in other plantations, it seemed highly probable, in view of discoveries mentioned later, that the trouble would not be attributed to any such agent. Nevertheless, further work was anticipated along pathological lines, since some causal agents—e.g., bacteria—are very refractory and do not readily respond to cultural experiments. The details of the pathological procedure will find their place in a complete final and scientific report.

Meanwhile, the investigation was also devoting attention to the matter of nematodes or eel-worms, since these were found to be abundant in all plantations, and their presence readily indicated by the almost constant presence of galls on the roots of affected and apparently non-affected plants. Plants from Northern Queensland were planted in tanks filled with steam-sterilised soil at the laboratory, with a view to settling the possible effect of soil factors—e.g., nematodes, parasitic fungi, and bacteria—in a purely preliminary manner.

It soon became apparent that such experiments, if they were to be of any scientific value, would have to be carried out under such conditions of control as obtain in a properly equipped glass house. This development and the necessity for such a glass house for the purposes of other experiments which were to be tried out, compelled the supervisor to request the erection of such a glass house; the cost of the erection of this building was considered to be insignificant for scientific purposes where the national loss due to the disease was so great.

The investigation had for some time been desirous of enclosing plants in muslin or cheese-cloth nets, with a view to conducting preliminary experiments as to the transmission of the disease by insects to healthy plants grown in sterilised soil, but there was reason to believe that for out-door work in this area such nets would not be successful on account of violent winds. Such experimental

work was delayed largely by the determination to postpone the same at that stage until a glass house was available.

Keeping in view the possibility that the disease might be of the Mosaic type of virus disease, attempts were made to produce the disease in healthy plants from Northern Queensland grown in sterilised soil, and inoculated with the sap of affected plants. There was no evidence manifested for the transmission of the disease in the material used in these preliminary experiments, but it was recognised that further work along these lines should be carried out when the glass house was available.

Similarly, no results were obtained by

inoculating sterilised soil

with three species of fungi which were isolated from the roots of some specimens of plants affected with Bunchy Top. Further, the association over a long period of diseased and healthy plants in sterilised soil and in the same pot, out-of-doors, so that the roots were in intimate association, failed to produce the disease in the healthy plant (an experiment which has since been repeated with several plants under glass house conditions with the same results). Meanwhile, considerable work was accomplished on the experimental plots.

One of these with excellent soil had previously been affected with Bunchy Top, and after being leased has been thoroughly ploughed (part of it had rested for a period of several months) prior to the planting of the same by the Investigation Committee in October, 1924. The plants were selected from various areas—some were plants which appeared to have stood out against the disease in affected plantations, some which appeared to have shown some signs of healthy constitution taken from a deserted plantation, healthy plants from Bribie Island and Bracalba (Queensland), and three species of wild Bananas from the neighbourhood of Cairns. The objects in this experiment were to determine the possibilities of resistance in local stocks, the possibilities of recovery from the disease, to make an intensive study of the incidence of the disease in originally undoubtedly healthy plants, and to determine the possible effects of cultural treatment in upholding resistance in healthy plants, and the possible resistance of wild stock to the disease.

Another plot on virgin land which had grown Lantana for eight years was cleared and planted with healthy stock from Bracalba. It was considered that, if soil factors such as physical and chemical constitution,

bacteria, fungi, or nematodes played the major role in the direct production of the disease, it was possible that the plants on the plot of virgin land would stand out in contrast to those on the other plot which had carried Bunchy Top plants.

The early outbreak of disease in the plot of virgin land in January, 1925, and its rapid development throughout that plot within a few weeks, contrasted with the very slight development of the disease on the other plot, came as a surprise, and led to an intensive study of the conditions prevailing in this plot. It was noticed that aphides were particularly abundant on this plot, an abundance possibly to be attributed to the topography of this lower plot being responsible for the bringing about of conditions more favourable for the aphides.

At once aphides were transferred from affected plants to healthy plants in sterilised soil placed under nets in the ground of the laboratory, and the disease made its appearance in these experimental plants in about three weeks. The experiments were repeated

by transferring aphides

from affected to healthy Bracalba plants grown under nets in the University grounds at Brisbane, where the disease appeared in several plants in twelve days. Thus a definite lead was established to the investigation, and at once preparations made for following up these results in the glass house, arrangements for the construction of which had then been completed. The success of the later experiments has been set out above. The Supervisor welcomes the opportunity of stating that the results obtained are largely due to the outstanding ability and enthusiasm of the Assistant Plant Pathologist, Mr. Magee, and the keenness, diligence, and practical ability of the Horticulturist, Mr. H. Collard. To them he owes everything in the accomplishment of that portion of the task now completed.—Queensland "Agricultural Journal."

Our correspondent reports, 18/12/25, that luring has again proved successful with the fruit fly. Stone fruit crops, also Apple and Pear, are medium, quality good; Grapes, below average. With citrus, after profuse blooming, there was an excessive drop, and only a medium crop can be expected.

Pineapples.—A big summer crop expected. The destruction of Passion-fruit vines by an injurious malady warrants investigation.

New South Wales.

M.I.A. NOTES.

Our correspondent at Leeton, Murrumbidgee Irrigation Areas, reports, 18/12/25, that the local cannery is taking Mansfield, Moorpark, and Trevatt Apricots, but not Oullin's and Newcastles; growers are pulling out trees of the latter varieties.

The Red Scale has been prevalent, experiments with a parasite from Western Australia show promise of success.

There is ample labor available for the Leeton cannery. Jones and Co. are taking from the Mirrool orchardists 3,000 tons of Cling Peaches and 500 tons of other varieties,

FRUIT FOR ESSENCES.

Adjustment of Tariff would Assist Fruitgrowers.

In giving evidence before the Tariff Board recently, the case for increased protection for Essence Manufacturers was put by Messrs. J. L. Moore, Laurence, Carthew and Batkin (for the manufacturers), and Messrs. W. J. Foster, W. C. E. Jones, H. Henderson, Evans and R. E. Boardman (for fruitgrowers). Essences to the value of £71,000 were imported last year, a large portion of which would be returned to Australian fruitgrowers if sufficient protection were given to the essence manufacturing industry.

FOR SALE.

TWENTY ACRES, 26 miles from Melbourne. Owner leaving State; a really desirable country home, 1½ miles from railway. About 14 acres of Apples, Apricots, Lemons, all in third year; remainder divided into grass paddocks, with large dam, pump and horse trough. Fibro cement house, containing 5 rooms, bathroom and kitchen, cement verandah all round, sewerage by "Kaustine" system, cast iron bath with heater, wardrobes and cupboards built as fixtures. Outbuildings: Dairy, 2 stables, cowshed with bails, chaff houses, fowl houses, washhouse with fixed cement tubs, copper, large shed accommodation for vehicles, tools, etc. Water laid on to everything from gal. tanks, 3,600 gallons.

Price, £2,300, £1,000 deposit, balance in 3 or 5 years.

Apply P.J.R., c/o "Fruit World," 9 Queen Street, Melbourne.

"WAVE OF IMPERIAL SENTIMENT."

Australia Should Benefit.

In a letter to the Editor dealing with the sale of Australian produce in British markets, Capt. W. J. Wade, representative of the Manchester Ship Canal Co., refers appreciatively to Wembley and other efforts to popularise Dominion products. He urges economical distribution, i.e., sending the goods to the ports nearest the consumers, instead of incurring unnecessary rail freights. For instance, Manchester serves a population of over 10,000,000 people within 100 miles' radius. Australian producers



Miss Patrice Grace in prize winning costume at Williamstown Hospital Ball. Illustration by courtesy Vic. Railways Magazine.

are thus offered a golden opportunity of securing and consolidating a bigger share in the trade of British provincial markets—trade which they are entitled to on the merits of their products.

Spray Spreaders Improve Appearance.

The use of a spreader in the late sprays will reduce the mottled appearance often noticeable on Apples in the orchard and on the show bench. The spreader does not reduce the arsenic, but makes a more even distribution.

New Zealand.

News and Notes of Interest . . . Cultural and
Marketing Items.

(By Avro.)

THE MONTH'S WORK.

FROM now onwards the stone fruit will be going steadily forward to the markets, and it is necessary to give constant attention to the picking, grading and packing.

The second brood of codlin moth must be expected about this time, and arsenate of lead should be applied at frequent intervals. Although it is generally supposed that an application every three weeks will effectively deal with the trouble, this is not always the case, and, where possible, growers should spray every fortnight. The arsenate of lead should be kept as fresh as possible, so that it will quickly be effective. It will be found that it will greatly assist in eradicating the leaf roller caterpillar. Black Leaf 40 will be found useful in controlling leaf hopper, but if the insect is allowed to get into the winged state, eradication will be found almost impossible.

Brown rot appears to have made itself noticed in some of the citrus groves, and the application of Bordeaux mixture is necessary as a controlling measure. This spray will also control any of the fungous diseases which may be in evidence. Cultivation should also be carried out during the month.

In the Garden.

In some districts dry weather has checked the growth of later varieties of Strawberries, and a dressing of superphosphate will do much good, especially where rain is experienced. Strawberry plantations will not last more than about four years in New Zealand, and growers should prepare to follow on with fresh plants as the others go off. Passion-fruit seeds should be planted now, ready for putting out early in the spring.

The winter varieties should be well established by this time, and a dressing of nitrate of soda will be found useful. Tomatoes grown in the open are being harvested all the time, and in order to help the final crop along, a dressing of liquid manure will be found suitable. Salads and quick maturing vegetables can be sown all the time, care being taken to keep the beds clean and free from weeds.

IN HAWKE'S BAY.

Heavy Crops Expected.

The dry weather experienced throughout Hawke's Bay during the greater part of the growing season has had an excellent effect upon the orchards there, and there is every prospect of heavy crops of all classes of fruit being gathered. The stone fruit turned out well, there being less brown rot than last year, and many of the early varieties of Plums and Peaches went on to the market in first-class condition.

Generally speaking, fungoid diseases were noticeable by their absence this season, and black spot, which usually does such damage to orchards in the district, did very much less damage than usual. Apples and Pears are now looking in a very healthy condition, and it is unlikely that they will be seriously affected by any bad weather from this time forward, although, of course, there is always a danger of losing a portion of the crop should any severe storms be experienced.

One thing noticeable in all the Hawke's Bay orchards was the attention which was being paid to the tillage of the soils, and the effects of the continued dry weather had been nullified owing to the excellent preparation which had been made by the growers.

Export growers in the district have ordered 75,000 cases from Canada, all of which will be exclusively used for the export trade. It is unfortunate that local millers are unable to turn out cases as good as those which come from Canada, and it is an interesting sidelight on the timber industry to find that it is cheaper to import the cases from Canada than it is to buy them in New Zealand.

SUB-TROPICAL FRUITS.

In North Auckland District.

Experiments Proposed.

It has long been recognised that the climate of the North Auckland district is such that sub-tropical fruits should grow there without difficulty, and a series of experiments in this connection are to be made there in

the near future. The experiments will be carried out by individual growers under the supervision, and with the assistance of the Agricultural Department, and, if successful, there is every likelihood that a valuable addition to the district's fruit will have been discovered.

Recently the Whangarei Fruit-growers' Association received word from Mr. J. A. Campbell, Director of the Horticultural Division of the Agricultural Department to the effect that he was prepared to co-operate with growers in a test of sub-tropical fruits. The Department would provide the trees, the spray, the manure and the pruning, the owner merely finding the land on which the experiments could be carried out. The experiments should be extended over a period of from seven to ten years, which would allow a thorough test to be made, and which would conclusively prove the suitability or otherwise of the climate for tropical fruits.

It is proposed to try out different varieties of Oranges, Grape fruit, Lemons, Figs and Loquats, besides testing the conditions under which the Avocado could be successfully reared. This well-known American fruit is being grown for the first time in a number of orchards throughout New Zealand, but this will be the first occasion on which a proper test will have been made.

Growers in that district consider that the climate around Whangarei is very similar to that of California, and that therefore the whole of the district is entirely suitable for the growing of all varieties of sub-tropical fruits. North Auckland bids fair to become one of the greatest

citrus fruit producing

districts of the Dominion, and growers there believe that under proper cultivation the whole of the Lemons required by the New Zealand market could be produced.

It is confidently anticipated that the experiments which will shortly be commenced will play a very important part in the development of the fruitgrowing industry in the far north.

SOUTH AMERICAN MARKET.

The Embargo Lifted.

General satisfaction is expressed by fruitgrowers throughout the Dominion at the lifting of the embargo against New Zealand fruit by the Argentine Government. Next season a considerable quantity will be sent forward, and on the advice of Mr. Rice, of the Agricultural Department, the fruit will be shipped in the freezing chambers of the various vessels.

New Zealand has now succeeded in working up a good trade with South America, and this country can absorb at least 50,000 cases of Apples a season. The particular advantage attaching to the market is that it likes a variety of fruit for which there is little demand on the English market. The demand in England is all for small Apples, but the Argentine prefers Apples of larger size, and the Delicious variety is especially popular, this fetching about 3/- a case more than the other varieties this season.

The reason for the embargo being placed on New Zealand fruit this season was stated by the Argentine Government to be because the dreaded Mediterranean fruit fly was in the Dominion. The New Zealand Government made representations on the subject with the result that the embargo was lifted for one shipment, and some 16,000 cases were sent across this season.

Strong representations have since been made by the New Zealand Fruit Export Control Board, and agents who have approached the Argentine Government, have succeeded in having the embargo removed. Prices last season were very good indeed, and growers throughout the Dominion will welcome the news that a free market is now available.

AUCKLAND'S EXPORT.

Prospects Excellent.

There is every indication that the export of fruit from Auckland this season will greatly exceed that of former years, and it is anticipated that 10,000 cases will be sent away from the Huapai area alone, although this district is making its debut as far as export is concerned.

The majority of the crops in the district should be as heavy as last year, as weather conditions have favored the orchardists there, and as additional areas have been planted out in orchards and are about to come into bearing, the production of fruit in the district will be considerably more than last season. The visit which was paid by Colonel Gray, Chairman of the Fruit Export Control Board, and Mr. H. E. Napier, Secretary of the Fruitgrowers' Federation, has been productive of a great deal of good in that it has demonstrated to growers the value of the arrangements which are being made on their behalf in connection with the export markets. Growers realise that the presence of a permanent representative in England is going to assist them immeasurably in the selling of their crop, and having complete con-

fidence in Colonel Gray, intend taking every advantage of the facilities afforded them.

The fact that fruit can this year be shipped direct from Auckland instead of having to be transhipped at Wellington and pre-cooled there, is also playing an important part in the decision of the growers to favor the export markets. During their visit Colonel Gray and Mr. Napier made all the necessary arrangements for the pre-cooling of the fruit at the stores at Auckland.

By the time these notes appear in print, Colonel Gray will have landed in England, and will be directly engaged in getting into touch with the various markets which are open for New Zealand Apples.

AROUND THE DOMINION.

Notes from Here and There.

As a result of the installation of hydro-electricity in Hawke's Bay, orchard spraying by electricity will be established for the first time this season. Mr. Lancaster, engineer to the Power Board, said recently that electric spraying was going to be a good proposition. According to Mr. A. M. Robertson, of the Hawke's Bay Fruitgrowers' Association, 30,000 feet of pipe line will be laid this season in the orchards of the district.

Spraying in the Nelson district this season was, owing to the great amount of rain experienced, carried out under very bad conditions, and it is certain that next year many of the larger orchards will be equipped with piping. Already some of the most progressive orchardists have adopted this method, and they have proved that it pays. After heavy rain, when it would be impossible to get horse-drawn vehicles on the ground, spraying by means of pipe lines is in full swing.

The manner in which shipments of fruit from New Zealand had carried was the subject of favorable comment in the annual report of F. W. Moore and Co., London. The report stated, inter alia, that the shipments of both Apples and Pears had carried better than ever before, and that bitter pit had not been nearly as bad as usual. Amongst the varieties which were absolutely free from bitter pit was the New Zealand Cox's Orange.

Growers Sued for Cool Storage Dues.

A case of interest to fruitgrowers was heard recently when the Nelson Freezing Co. proceeded against two orchardists to recover money alleged

to be due for the storage of Apples, the defendants counter-claiming for loss sustained through the Apples going bad. They alleged that the storage provided had not been fit and proper for Apples. In giving judgment for the plaintiffs on both claim and counter-claim, the magistrate said that the trouble was due not to any negligence on the part of the plaintiff, but because the means of safeguarding against flesh collapse were unknown.

That New Zealand Apples should be distributed to a greater number of English ports is the opinion expressed in a recent report from an English firm handling many of the consignments. The firm stated that if the fruit could be spread over a greater number of ports, considerably larger quantities could be absorbed without the prices being affected. At the present time the handling charges from the ports to various inland towns were so high that only a limited number of people could afford to buy the fruit.

The first Strawberries received in the Wellington and Auckland markets this year realised 3/6 per chip retail, but once the supplies became more plentiful, the price dropped to 2/-, and there is a prospect of a further drop before the end of the season. The bulk of the Strawberries on the Wellington market come from the Auckland district, but many are also received from Motueka, in Nelson.

The first shipments of Apples from America arrived in New Zealand during October, and since then there have been a number of shipments. Judging from present appearances, it would seem that the number of American Apples coming into New Zealand this year will be about the same as last season. The arrival of the American fruit interfered somewhat with the sale of New Zealand Apples which had been held in cool store, many people purchasing the American Apples, despite the fact that they were dearer.

More than 10,000 cases of Apples which were stored in Auckland during the latter part of the year became affected with flesh collapse, and the greater part of these were lost. The great majority of the cases contained Sturmer Apples, which, as a general rule, keep exceptionally well when in store. A certain amount of the fruit came from the Nelson district, but the greater part came from Hawke's Bay, a district famed throughout New Zealand for the quality of its Sturmer Apples. The ex-

tensive importations are due to the fact that the Sturmer, which is an ideal dual purpose Apple, does not do well in the Auckland district.

* * *

The use of the tractor in the orchard is becoming more general in New Zealand now, and in several districts many tractors are to be seen at work this season in the orchards. Around Teviot, in Otago, the use of the tractor has not yet become general, but three tractors are being tried out this year, and there is every prospect that there will be more in the district next year.

Power spraying is also becoming increasingly popular, and around Teviot several new plants have recently been landed.

* * *

Woolly Aphis Parasite.—The aphelinus maul, which has been at work around Teviot for some time now, has done splendid work, and is gradually spreading throughout the whole of the district. Growers feel confident that in a few more years the control of woolly aphis will be extremely simple, thanks to this valuable parasite.

* * *

The highest price realised in New Zealand this year for early Strawberries was 10/- a pound, this being got for a small consignment of early Strawberries grown at Sumner, and sold in Christchurch in September.

* * *

Owing to the exceptionally fine weather experienced during the blossoming period in Poverty Bay this season, excellent crops of both stone and pip fruits set in most of the orchards in the district. Strawberries were backward, but other small fruits were abundant, especially Gooseberries, which were exceptionally good. Later in the season, and just before the early Plums were coming on to the market, a severe hailstorm did much damage to the orchards, and affected the quantities of stone fruit maturing. Many of the commercial growers lost practically all their early Plums. Apples which were just setting did not suffer to the same extent.

* * *

The first of the Canadian Apples to arrive in Poverty Bay this year struck a dead market, owing to the fact that many cases of local Apples were still in the cool store, and retailers had to pass them on to the public at prices which returned them only the barest margin of profit. The Apples had in fact to be sold in direct competition with the local fruit. Next year, however, Poverty Bay will have entered the export field, and there should be no glut.

Auckland.

Our Auckland correspondent reports (5/12/25) that their principal fruits are Apples—the chief varieties being Delicious, Munroes, Red Astrachan, Gravenstein, Dougherty, Willie Sharp, Salome, Golden Pippin, Five Crown and Ballarat Seedling, together with a lot of other varieties to a lesser extent. Sturmer and Jonathans are not grown to any extent in this district. In a few years' time there will be a large quantity of Granny Smith and Cox's Orange.

Pears—W.B.C., Winter Cole, W. Nelis, Kieffer, Packham's, Josephine, P. Barry, B. Clairgeau and B. Diel; these are the main varieties grown, but owing to the prevalence of "Pear Midge" the crops are not good.

Peaches—Triumph, Carmeau, Paragon, A.I., Kia Ora, Osprey, Sea Eagle, Lippiatt's Late Red and Golden Queen. Three new varieties promise well, viz., J. H. Hale (Million Dollar Peach), Wallace Best and Yates' Late Cling.

Nectarines—The Goldmine Nectarine is practically the only one grown, and then not to any great extent, as "brown rot" takes such heavy toll of it.

Apricots—These are grown only in the Thames district.

Quinces—Van Dieman and Missouri Mammoth.

Lemons—Chiefly Lisbon and Eureka. Lemon growing in this district is going ahead by leaps and bounds, and it will not be very long before we can supply all the Lemons required for consumption in New Zealand. In the past the mistake has been in planting in unsuitable localities where frosts occur, but now, especially in North Auckland, Tauranga and Gisborne, to say nothing of favourable localities along the seaboard, large plantations are being made every year.

Oranges—Practically no sweet Oranges are grown except in the North Auckland district; but the Poorman Orange is largely grown, and as it is a Grape-fruit as well as a marmalade Orange, its production increases each year.

Plums—Chiefly Japanese and hybrids, as the English Plums and Prunes, with few exceptions, do not do well here.

Passion Fruit—Largely grown where there are no severe frosts.

Persimmons—These are being grown more each year, both for their fruit and ornamental foliage. Unfortunately, in this district we cannot grow Cherries, Black, Red or White Currants, and only a limited amount of Gooseberries.

Crop Anticipations for 1925-26.—Apples—Fair, not so heavy as last year. Pears—Medium, better than last year. Peaches—early and late varieties, light; mid-season, heavy. Plums—Japanese, heavy; others, medium, better than last year. Citrus fruits, heavy blossoming and setting well. Nectarines, medium; better than last year. Quinces, heavy setting. The weather has for the last three months been very boisterous, with cold, cutting winds, hence the setting of all fruits has not been up to expectations. Until recently we have had heavy constant rains, which retarded the spring ploughing, and now the high winds have dried up the ground, so that ploughing is almost an impossibility.

Hastings.

Mr. F. Young, of Hastings, N.Z., reports, under date, Nov. 26th:—

The principal fruits grown in Hawke's Bay are Apples, Pears, Peaches, and Plums, also a few Cherries and berry fruits.

The principal varieties of Apples are Gravensteins, Cox's Orange, Jonathan Munroes, Delicious, Ballarat Seedling, Sturmer and Dougherty's.

In Pears, the principal varieties are Williams, Louise Bonne, Capiaumont, B. Bosc, Josephine, W. Cole, W. Nelis, and P. Barry.

In Peaches and Plums, a succession of varieties from early December to about the middle of March.

The Apple crop is heavy, Pear crop medium to light, Peaches and Plums medium to heavy.

The Apple crop will be about equal to last year. Pear crop somewhat lighter; Peaches and Plums similar to last year, with the exception of early Peaches, which are much lighter.

The area under fruit is 3,000 acres. The quantity produced last year was equal to about 500,000 bushels.

In regard to this year's fruit crop, it is particularly clean as regards black spot, owing to the dry weather conditions that have been experienced in the spring, and to the better application of the different fungicidal sprays. As time goes by, growers are learning to use the brands of spraying materials, and are applying them more thoroughly and systematically.

Owing to the low prices obtaining for fruit during the past season, the export side of our business is coming to the fore, and although our showing in the past has been a very poor one, I am of the opinion that our export business will show fully 100 per cent. increase from Hawke's Bay this coming season.

Whilst the acreage hereabouts may be considered by some to be small, nevertheless our production is perhaps the largest per acre of any district in New Zealand. It is quite a common practice to pick 10 bushels per tree, and there are instances (and not isolated ones) where double that quantity per tree has been gathered.

* * *

EXPORT FRUIT CONTROL.

The Chairman of the Export Control Board, Col. Gray, toured various districts, and spoke to meetings of growers.

By exporting the surplus, he stated, it would be unnecessary to closely watch the local market, as the fruit could be distributed through the ordinary channels without fear of a glut. All fruit which did not come up to a certain standard should be kept off the market and used for cider or pulp. He believed in both export and local control, and that it was useless having one without the other.

With regard to exports the degree of maturity for picking had to be watched, also climatic conditions. Good grading and packing were vital.

Continuing, Col. Gray stated that whereas London would always provide the biggest market, the fruit should be more widely distributed. By having a representative in London he said they would be able to keep the fruit away from the markets that were temporarily glutted, and send it to places such as inland towns or to the continent, where there was a shortage.

Fruit in London.

Messrs. Dennis & Cooper Ltd., of London, offer their well established facilities to fruitgrowers in Australia and New Zealand. The firm is one of the oldest in the Covent Garden Market. In order to be of service to growers in consigning their fruit, the firm offers initial finance to enable growers to secure full advantage of the market.

All sales are made by private treaty. No sales have been made by public auction for some years past, although formerly that was the firm's system of selling. Accounts are completed and sent out to Australasia immediately the fruit is disposed of, which matter is always dealt with as expeditiously as possible.

"We are anticipating a good demand for Australasian fruit next season," state Messrs. Dennis & Cooper. "Any of the Australasian Government officers will no doubt be pleased to give anyone information respecting our firm who desires it, as their respective representatives in London are in very close touch with the methods of selling and doing business here."

Western Australia.

Fruitgrowers' Conference.

Fruit Marketing Bill Opposed.

Export and Local Markets, Scientific Research Advocated.

A CONFERENCE of the Western Australian Fruitgrowers was held at Bridgetown on 24th and 25th November, 1925.

Rev. F. Davis, who presided, said that as the State Fruit Advisory Board was now defunct, it was necessary that growers should organise so that they could speak with a united voice.

Messrs. Thomson and Sampson, M's.L.A., also spoke; the latter regretted that the Government did not make available the small amount necessary for the Advisory Board to continue.

Fruit Marketing Bill.

Rev. F. Davis stated that the opposition to this Bill, known as the Primary Products Bill, was caused generally through the growers not being consulted before the Bill was drafted.

Mr. Whitfoht (Capel) said that at the present time growers could dispose of their fruit to good advantage, and interference was unjustified. With regard to Apples, growers could export on their own account, or sell straight out as they chose with satisfactory results. The same applied to Oranges and stone fruit, and the principle should not be interfered with. To hand over the fruit to a control board might, or might not, be satisfactory. Legislation could help if it dealt with cold storage, and the use of ventilated trucks for export fruit. A central market with access to the railways would improve the local trade. He moved that the Primary Products Bill be opposed.

Mr. Edwards (Manjimup) seconded the resolution.

Mr. Bond (Bridgetown) said that the proposed Bill was "rotten." Whilst they had the present satisfactory agents, the growers had not much to worry over. He challenged the Government to produce its authority for the introduction of this legislation. Where the Government could help, would be to see that space was reserved for Western Australian fruit, and that the Eastern States did not encroach on their space. He advocated Bunbury for a port instead of Fremantle.

Mr. Sparks (Bridgetown) said that voluntary boards had failed, and would always fail unless statutory powers were granted them. The Bill

was all right for those who liked to come under it.

Mr. Simper (Spearwood) said that under instructions from the Spearwood growers, he must support the Bill.

Mr. Yates, of the Federal Dried Fruits' Control Board, said he hoped that the Bill would go down, and out of its ashes a dried fruits measure would arise, making export compulsory.

Mr. Sharp (Donnybrook) and Mr. Beecher (Harvey) supported the Bill, which they said gave the fruitgrowers an opportunity to control the industry.

Mr. Willmott (Bridgetown) said that gluts are not avoided by Bills and Boards; he objected to the measure. He dealt with the Bill point by point, and declared it to be unnecessary and unworkable.

Mr. Sampson, M.L.A., said he believed the Bill to be good for all primary producers, giving growers an opportunity of bringing about control. Co-operation, so far, had been a failure.

Mr. Martin (Mount Barker) said that fresh fruit pooling was impossible. If voluntary organisation had failed, the brand of compulsion proposed by the Government was not acceptable to the growers.

Messrs. Martin and Jenkins, Mount Barker, Berryman, of Perth, and Thomson, of Westralian Farmers, objected to the Bill and its compulsory pooling provisions.

After further discussion, the resolution was carried, the voting being 52 in favour and 4 against. It was decided to send a copy of the resolution to each member of the Legislative Council and the Minister of Agriculture.

State-wide Organisation.

On the motion of Messrs. Booth and Yates, it was decided to recommend that a State Fruit Council be formed, composed of representatives of each branch of the industry as follows:—Citrus 2, pip fruit 2, stone fruit 1, Grapes 1, dried 1, other fruit and Tomatoes 1. These representatives to be elected by sub-councils of seven, representing each branch of the industry. The sub-councils to be elected by the Associations affiliated

and registered with the movement. The finance of the scheme to be raised by a levy on the various products of industry, a proportion of which to be returned to the sub-councils and local Associations for their working expenses.

In the discussion, growers favoured a levy of $\frac{1}{4}$ d. per case, which, it was thought, would yield about £3,000.

The following were appointed as a committee to draft the proposals:—Messrs. Booth, Martin, Hill, Beecher, Yates, Simper, Sharp, Davis and Sparks.

The report was subsequently presented to the incoming executive (details will be published later.)

Mr. R. S. Smith read a paper on pre-cooling of Apples for export, and was accorded a vote of thanks.

It was decided, on the motion of Mr. Abbotts and Whitfoht, to thank the Harbour Trust for ventilating the shed at Fremantle wharf and requesting further extensions.

Mr. Lowe read a paper on Oiled Wrapping Paper for Fruit in Cool Stores, and was cordially thanked.

It was decided to request the Institute of Science and Industry to investigate "scald" in Granny Smith Apples. Mr. Sparks said that experiments should be carried out in West Australia as well as in the Eastern States.

The proposal by Mr. Booth that only one size and shape of cases for export of each kind of fruit be used, was lost.

On the motion of Mr. Booth and Mr. Yates, it was decided that the shipping companies be asked to instal the instruments recommended by the Cambridge University Low Temperature Station for regulating temperatures in holds, and for the detection of carbon dioxide.

Also they decided, on the motion of Messrs. Thomas and Edwards, that the West Australian shippers' committee be asked to use their influence with the shipping companies and stevedores to liberally use walking planks or other effective means to protect fruit from damage.

It was further decided to recommend that greater care be taken in the stowage and carriage of Pears for export, and that growers should ship only the standard varieties of Apples and Pears; they would be well advised to work over the odd varieties.

Decided to request the Government to tighten up the inspection of fruit for export, and that the regulations be adhered to in all the States.

Decided, on the motion of Messrs. Button and Whitfoht, that the standard of export be maintained, and that as soon as power is obtained, a system of advertising West Australian fruit be conducted.

It was decided, on motion of Messrs. Davis and Beecher, to recommend to the Government that the Chief Fruit inspector be allowed to attend the annual conference of the Australian Fruit Council.

be established in Perth, to be controlled by a board, and that growers be recommended on the board. Mr. W. A. Huggett seconded the motion.

Mr. Sampson, M.L.A., said that the provision of markets was a municipal matter, and that growers should hesitate before approaching the Government. They should endeavour to erect a market themselves, and have sole control. The motion was carried.

A hearty vote of thanks was passed to Mr. Sampson and Mr. Thomson, M's.L.A.

Election of Officers.—Office-bearers were elected as follows:—

President, Mr. McN. Martin; Vice-President, Rev. F. Davis; Executive: Messrs. E. Thomas, T. Skinner, K. Sounness (Mt. Barker), E. E. Hill, C. H. Ozanne (Bridgetown). One delegate each from Capel and Manjimup to be appointed.

The Chairman eulogised the work of their Hon. Secretary (Mr. A. S. Lowe), and appreciation of the Chairman and Secretary was carried with acclamation.

W.A. Rejects Compulsion.

The Primary Products Marketing Bill, which was passed by the Western Australian Legislative Assembly, was defeated by the Legislative Council.

* * *

Mount Barker Cool Stores.

The balance-sheet of the Mount Barker (W.A.) Fruitgrowers' Cool Storage Co-operative Society Ltd. shows subscribed capital, £12,498 (£1 shares), of which the paid-up capital amounts to £3,332/16/-, being 12,498 shares paid to 5/4 each. Included in their assets are buildings and plant to the value of £10,485/10/3; their profit for the year ended 31st January, 1925, is £321/15/3.

Apple Drying.—The Mount Barker growers' organisation ran the Kendenup dehydrator for a short time, but from their experience they state they are afraid that the drying of Apples for the English export market is not a paying proposition. When in England, their secretary found that the price for really good dried Apple rings was in the region of 56/- per cwt., delivered in England; and it will, therefore, be seen that it would not be possible to give the growers even $\frac{1}{4}$ d. per lb. for fresh fruit.

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Garden.

Dried Fruits Bill.

On the motion of Messrs. Yates and Jenkin, it was resolved "that this conference, whilst not in favour of the Primary Products Bill, is of the opinion that the necessary legislation should be enacted at the earliest opportunity to enable the dried fruits producers of West Australia to fall into line with the dried fruit producers of the other States of the Commonwealth."

Central Markets.

Mr. Simmons moved that this Conference request that central markets

Donnybrook.

Mr. Gus. Sharp, of Donnybrook, W.A., reports under date, Dec. 5th:—The Apple crop in this district has not fulfilled the promise of bloom. The prospects are now—Jonathans and Cleos., medium; Dunn's, light and patchy; Yates, light to medium; Rokewoods, light; Grannies's medium to heavy.

Pears, medium to heavy; Peaches (mid-season), medium to heavy; Plums, light.

* * *

Swan Valley.

A correspondent reports under date, Nov. 25th, as follows:—

The principal fruits are Grapes, table and drying, early Peaches, and Citrus. A medium crop is expected in Grapes, and heavy crop in Peaches and Citrus. On the whole, the crop appears to be heavier than last year. The estimate is 1,000 tons Currants, 200 tons Sultanas, and as many Lexias as people care to dry. The total quantity of dried fruits produced last season was 1,058 tons.

Despite the several years' disappointment in price and a bad crop last year, the vineyards of the Swan are being generally maintained and cultivated in an excellent way. Black spot made its appearance early in the season, but has been checked, and since then we have suffered a little from a succession of easterly winds, which have blown the vines about a lot. However, generally speaking, the prospects for both table and drying Grapes are good. State reports are that both stone fruits and Apple settings are heavy.

Marketing Act Rejected.

The much-talked-of Fruit Marketing Act would appear to be "still born," for nobody was pleased with it.

The Dried Fruits growers are hoping that a measure giving them powers of control will be passed, as undoubtedly the one class of fruit produced in the west, that lends itself to control, is Dried Fruits. The financial position of Currant and Lexia growers is very low. Those who exported will probably be out of pocket over it, and growers feel that if the Federal Government could give them some assistance, it would be much appreciated. Sultanas seem to be all right, but the Currant and Lexia growers seem to go from bad to worse.

Finish every day and be done with it. You have done what you could. Some blunders and absurdities, no doubt, crept in; forget them as soon as you can.—R. W. Emerson.

"Sunrased" Courier

NEW SULPHURING REGULATIONS.

Over-Sulphuring May Mean Rejection of Fruit.

Sulphuring of Dried Fruits.—Now that the drying season for Tree Fruits is approaching, the Association desires to bring under the notice of growers the Regulations which come into force in Great Britain on 1st January, 1927, as follows:—

- Dried Fruits:—**
- (a) Apricots, Peaches, Nectarines, Apples and Pears. Preservative allowed: Sulphur Dioxide, parts per million, 2,000.
 - (b) Raisins and Sultanas. Preservative allowed: Sulphur Dioxide, parts per million, 750.

This represents an allowance of 2 parts per 1,000 of Sulphur Dioxide in Dried Tree Fruits, and $\frac{3}{4}$ of a part per 1,000 in Raisins and Sultanas.

From enquiries made it would appear that our Dried Fruits should not have difficulty in entering the British Market in the manner in which they are treated at present, but growers are advised not to over-sulphur; otherwise, the fruit may be rejected on arrival in Great Britain.

DRIED FRUITS, SALES IN LONDON.

In a cable to the Chairman of the Commonwealth Dried Fruits Control Board (Mr. W. C. F. Thomas), the London Agency stated that the following sales of dried fruits have been reported during the period from the 27th November to 3rd December, 1925:—

Sultanas (178 tons) average price, £67/14/- per ton.

Currants (248 tons), average price, £27/5/- per ton.

Lexias (27 tons), average price, £26/14/- per ton.

Inclusive of the foregoing, the total sales recorded with the London Agency of the Board since the opening of the 1925 season are as follows:—

Sultanas, 11,484 tons, average price, £68/6/- per ton. Currants, 3,848 tons, average price, £33/13/6 per ton. Lexias, 2,288 tons, average price, £35/4/- per ton.

AUSTRALIAN SALES.

The sales in the Commonwealth of Association fruit up to 30th November, 1925, were as follows:—

Currants 1,893 Tons.
Sultanas 4,184 Tons.
Lexias 1,168 Tons.

GRUBS IN DRIED FRUIT.

Investigation is Necessary.

(The Editor, "Fruit World.")

Sir,—One of the most pressing problems that calls for immediate investigation is the grub trouble in dried fruit. Some friends recently returned from London, and while there went through a warehouse where Australian Currants were stored, and were assured by the proprietor that between the time of shipment from Australia and the time of arrival in England, the Currants became grub infested and unsaleable. Messrs. Connolly & Dix are reported to have discovered a preparation of treating packing paper which is effective in preventing the grub. This should be thoroughly investigated. Before starting enquiry and research, it would be well to ascertain what is being done in other parts of the world. I have in front of me a book by Thomas H. Rector, a consulting chemist, published by John Wiley & Sons, in New York, in 1925. In this he refers to sulphur dioxide as a preserver of dried fruits, dehydration, and sterilisation, and carbon dioxide. As regards the last-mentioned, he says, at page 177—"It also has the property of preventing all development of insect life, and to kill all larvae, and adult forms after a few hours exposure. Recognition of these and other desirable properties is attracting attention to the possibilities of inert gas packing, and great progress is to be expected in this field in the next few years." At page 182 he says, "We may conclude, from this discussion, that heat sterilised, hermetically sealed foods, are proof against practically every form of spoilage for a reasonable length of time, and that therefore this method of preservation is probably the most secure of all methods."

We are now compelled to export a large proportion of our Currants, and it is therefore imperative that the grub trouble be solved.—I am, Sir,

F. G. SCAMMELL.

McLaren Vale, South Australia.
17/12/25.

TAKINGS AT WEMBLEY.

From Opening Day Saturday, 9th May, until Closing Day Saturday, 31st October, the total sales of samples etc., amounted to £3371/8/4. The average weekly sales were approximately £135.



Lemon Scab.

A correspondent, signing himself "A Grower," sends along the following interesting article relating his experiences:—

I should like to describe, under the above heading, some results of an experiment carried out on some Lemon trees in the Gosford district, which may interest readers of the "Fruit World." The trees are now ten years old. They have received from time to time, almost all the elements which are necessary, together with perfect drainage, to produce healthy plant growth; and as a result have produced almost clean crops of Lemons during the whole time they have been in bearing, while other trees in this locality have been so affected with scab, in some seasons, as to make more than 50 per cent. of the crop unmarketable.

In view of the fact that acid phosphate and sulphate of ammonia, and blood and bone, or bonedust, are almost universally used for orchards, none of which contain all the elements required to keep a tree healthy for more than a few years under commercial conditions, this may be of interest to orchardists who find it difficult to control Lemon Scab, and some other fungoid diseases of plants in the coastal or other fruit-growing districts, where the soil contains little or no lime.

As the soils of Cumberland and Northumberland are all deficient in lime (containing less than $\frac{1}{2}$ per cent.) the use of superphosphate and ammonium sulphate are directly contributing to the spread of fungoid diseases, unless lime is added to the soil previously.

The soil being already slightly acid, is rendered still more so by the continued application of superphosphate

and sulphate of ammonia, and gradually increases in acidity from year to year. Animal fertilisers will also increase the soil acidity, but more slowly.

The acidity of the soil thus brought about is highly favourable for the growth of nearly all fungus plants, which will be easily understood, if the conditions under which many fungoid plants are growing is observed, and litmus tests taken. This sour condition of the soil is most unfavourable to the growth of almost all cultivated plants, whose resistance to fungus disease is thus lessened each year, as the application is continued. And it is only a matter of time until the balance is in favour of the fungus plants, and the cultivated tree or other plant passes out of existence.

I quote here an extract from "The Soil," by Professor A. D. Hall, Director of the Rothamstead Station:—

"In the analysis of a soil, without doubt the most important figure is the proportion of calcium carbonate, for on that must be based the decision of not only whether liming is necessary, but what class of artificial manures should be employed. Where the calcium carbonate is scanty, manures, like superphosphate and sulphate of ammonia should never be employed, but basic slag, or some neutral phosphate, on the one hand, and nitrate of soda as a source of rapidly acting nitrogen on the other.

"The texture of the soil, the rapidity with which decay and nitrification of organic matter take place, and freedom from fungoid diseases, all depend on an adequate proportion of calcium carbonate in the soil, say, from $\frac{1}{2}$ to 1 per cent.; so that of all the determinations this is the most important.

"Again, as has been shown already, it is necessary as a base to satisfy the requirements of artificial manures like sulphate of ammonia, superphosphate, and kainit, or to prevent the soil being invaded by such organisms as the destructive fungus causing "finger and toe." It must, however, be clearly realised that lime is wanted as a base, not as a compound of calcium, necessary though calcium itself may be to the economy of the plant; and that only carbonate of lime (chalk, limestone, etc.) or quicklime and slaked lime, which promptly become carbonate of lime when incorporated with the soil, are capable of acting as the required base. Other calcium compounds, as superphosphate of lime, or sulphate of lime (gypsum), or phosphate of lime in bones, etc., are either acid or neutral, and do not supply the base required to effect the beneficial actions set out above; they cannot replace lime or chalk—in fact, they do not contain any "lime" in the farmer's sense. Unfortunately, it has been too often supposed that the use of artificial manures, such as superphosphate of lime, removed the necessity of a periodical liming of the soil, and some of the neglect into which this all-important operation has fallen may be set down to the unfortunate confusion hanging round the word lime. However, as will be gathered from a consideration of the effects of sulphate of ammonia in depleting the Woburn soil of carbonate of lime, the use of artificial manures generally demands an increased rather than a lessened attention to the periodical liming of the land. At Woburn the soil is light and sandy, containing but little lime, and the application of ammonium salts containing 50 lbs. of ammonia per acre every season

for 24 years, has rendered the land practically incapable of carrying the crops. A moderate dressing of lime, however, restores the fertility."

The Rothamstead Station was established in 1843, and crops have been grown on the different plots continuously ever since, so that results should be reliable and definite. It will be seen from the above that it is essential to add lime to the soil to grow and maintain a tree or other plant in healthy condition, more particularly when certain concentrated fertilisers are used.

Good results have been obtained in Gosford district from sulphate of ammonia for several years past, particularly with Late Valencia Oranges, but it is impossible that these good results will continue for many years, or as long as would be the normal life of the trees, unless the trees receive the remaining elements necessary for continued healthy plant life.

Lemons, being more sensitive, and under some disabilities owing to climatic conditions here, show first the bad results of partial plant feeding, and to such an extent, that many Lemon orchards eight to twelve years old, are so affected with scab and die-back as to make them quite unprofitable at that age, when they should be in their prime.

It seems to be a not uncommon practice as soon as scab appears, to stop the supply of manure to the trees for several years, in the belief that too much manure is the cause of the disease, but, as I hope to prove in these notes, it is the very want of a sufficient and properly balanced food that is lowering the resistance of the trees.

The trees I have had under observation have produced clean crops of good quality Lemons, the last crop of which I have just picked 20 bushels, not more than 5 per cent. are badly marked with scab, and there is no die-back of the trees.

The trees have received for food a continuous supply of poultry manure and wood-ashes, since they were planted ten years ago.

For commercial orchard use a similar plant food would be bone dust, sulphate of potash, and air slaked lime, or a chemical fertiliser applied on soil previously limed, with a green crop, and the fertiliser applied to it and not to the trees.

The trees mentioned have thus received with the exception of magnesium and iron (which are probably present in the soil in sufficient quan-

tity) all the elements necessary for healthy plant life.

It seems to be often overlooked in combating both insect and fungus diseases, that the first thing to be done is to grow the tree or other plant in a healthy condition, by the use of such plant foods as are deficient in the soil, together with perfect drainage, which is required for their assimilation by the plant.

If this were done the need for insecticides and fungicides, with their retarding effects on growth, would be greatly reduced, and spraying may, in the future, be entirely unnecessary, or certainly be reduced by 75 per cent. from the amount that is now required on many orchards.

The Lemon trees I have mentioned have been sprayed once and fumigated once during the whole period of ten years. There is at present little scale on trees or fruit.

It might, perhaps, be thought that the use of a complete fertiliser, such as is usually on the market, and in use on many orchards, consisting of superphosphate, sulphate of ammonia, and sulphate of potash, would supply all that is required; but this is not so, for the reasons already stated, as it is not a complete plant food at all in soils deficient in calcium and humus, and no plant can long remain healthy upon it, depending on the depth and class of soil in which it is growing.

It has been my intention to try and show in these notes that when a plant is receiving all the elements required for healthy growth, viz.:—Nitrogen, phosphorus, potash, calcium, sulphur, magnesium, iron and humus, there is almost complete absence of insect and fungus diseases. I do not wish in any way to detract from the value of any of the concentrated artificial manures in use, but simply to point out that they are only part of the food required by plants, and that unless all the elements are supplied, healthy growth cannot be maintained. As an example of this may be mentioned the many abandoned orchards in what were once our leading citrus districts.

I hope that the above will be of interest to growers, and by showing the results to be gained by a scientific system of complete plant feeding, will help to eliminate many of the diseases which are so destructive at present; and though costing a little more per acre for manure, will, in the end, lessen the cost of maintaining an orchard, and greatly increase the profitable life of the trees.

ANSWER TO CORRESPONDENT.

Strawberry Growing. — "Small Fruits," Hastings, writes:—I should be pleased if you could give me any information with regard to the following:—(1) Is there any way of destroying grass-grubs in a Strawberry-bed without harming the plants? (2) What is the best manure for Strawberry plants, the soil where these are planted being fairly rich, with a sandy loam underneath? (3) Can you recommend any particular kind of Strawberry plant for commercial use (apart from Melba) which has a good rich flavour, also where it is best obtainable?

Answer (by the Horticulture Division, Dept. of Agriculture).—(1) Nothing is known at present that is effective in destroying grass-grubs in a Strawberry bed without harming the plants. Beds on rather light soil usually suffer considerably from this trouble. (2) You say nothing of the age or condition of the plants. The following may be tried if the plants have not had a dressing this season: Four parts bonemeal, three superphosphate, two muriate of potash. Apply 5 cwt. to 10 cwt. per acre, working it with the cultivator. This may be followed by a dressing of nitrate of soda, 1 cwt. per acre, when the plants are in bloom. (3) If you are planting for commercial purposes it is wise to use such varieties as have been proved suitable to your soil and district. If you wish to try others besides Melba and Marguerite, a few Cresswell's Seedlings, Phenomenal and Duke of Edinburgh are suggested.

AUSTRALIAN FRUIT IN ENGLAND.

Review by Geo. Munro Ltd., London.

A very interesting review of the 1925 Australian Fruit Export season is to hand from Messrs. Geo. Munro Ltd., Covent Garden Market, London. The report deals with Apples, Pears and Grapes, giving interesting statistics and the varieties best suited for export. The firm urges that in future no Apples should be shipped to arrive in England after the first week of July: this would avoid, to a great extent, the otherwise inevitable clashing with local soft fruits.

This review, which runs into eight pages, is of interest to every grower and exporter. Copies may be obtained from the firm's agents in the several States.



Prof. U. P. Hedrick—A Leading Pomologist in U.S.A. and Author of many valuable Fruit Books.

Great Need of New Varieties of Fruits

By Prof. U. P. Hedrick, State Expt. Sta., Geneva, N.Y., U.S.A.

COMPLAINT is general that there are too many varieties of fruits. Those who sell fruit products find fault with the great number of unknown or little known sorts. Nurserymen object to long lists of the several fruits. And nearly every old orchard and a good many young ones, contain varieties which the owners have found to be of small value or of none at all. Let us look at the Nurseryman's and the fruit-grower's sides of this serious problem of varieties.

There is no question that thousands of worthless fruit trees are now being grown by nurserymen and growers. The fruit industry of the whole country ought to be relieved of the expense of caring for unprofitable trees, and markets ought not to be expected to dispose of a poor product in these times of low prices for fruits.

But there is another side to this question of varieties. In the long run it will be disastrous to the fruit industry of the country to have too few sorts of the several fruits. People will use more fruit and get more pleasure out of its use if there is a variety of kinds from which to choose. People do not and never will agree as to which is the best Apple, Peach, Pear or any other fruit. There is a most amazing variety of opinions when it comes to choosing "the best" of any fruit or any other food for that matter.

I want to emphasize the need of new varieties in another direction. We are at a standstill in fruit growing unless we have new varieties. The greatest progress we have made in horticulture in the last hundred years, or in any period of horticultural work, is in the introduction of new varieties. If we had to go back to the varieties of even fifty years ago, we should be in a bad way. We should have no one of the small fruits now worth cultivating, few Peaches, few Grapes, and relatively few Apples that we now consider best. No variety that we have at the present time is perfect. Every sort that one can name is better characterised by its faults than by its merits. The greatest progress we shall make in the next fifty years or in any

period in the future in pomology will be in the introduction of new varieties, and varieties will be improved as long as there is fruit growing.

Shortage of good varieties.—There are now not enough good varieties. With several hundreds of sorts of good Apples,—red, yellow, russeted, sweet, and sour,—it is wrong that the consumers of Apples can buy, at the present time, less than a dozen good sorts. It is too bad that, with a hundred or more Pears, consumers must be content with the Bartlett and a few other Pears, and that the Peach industry is handicapped with the Elberta, about the only sort that can be bought.

The same is true of Grapes; the Concord is the only Grape on the market in spite of the fact that there are dozens that might be raised commercially, the season is restricted and the tastes of people are restricted in the main to the Concord.

Varities do not Change.

Many fruit growers and nurserymen believe that our varieties are changing, that they are improving or degenerating. A discussion of this question is common in meetings of growers. Most men who have studied the history of fruits now believe that the varieties do not change; they are the same forever as on the day when they were introduced. When a plant is propagated by cuttings, buds or grafts, its heredity is complete; it does not change. An experiment at the New York Agricultural Experiment Station throws light on heredity in fruits.

Some fifteen years ago we obtained trees of the Baldwin Apple from every state in the Union having nurseries in which they were grown—88 trees from 44 different nurseries. In the different states, the Baldwin differs much. These trees were set out under as uniform conditions as were possible, and they have been in fruit for some years. Although the Apples on these trees, grown in the states from which the trees come, would have been widely different, yet, grown in New York they all snapped back into the old original Baldwin.

Occasionally we get what is called a "mutation" or "sport" from some standard variety; as, the nectarine from the Peach, the Red Gravenstein

from the common Gravenstein, the Red Spy from the normal Spy, and the Russet Baldwin from the red Baldwin. These are always very minor differences and usually have to do only with color. They constitute new strains of old varieties. They may or may not be an improvement on the parent variety.

Out of ten or twelve thousand varieties that have been described in the fruit books published by the State of New York during the past 20 years, not more than seven or eight sorts have originated as "sports" or "mutations."

How do Varieties Originate?

Nearly all of the fruits under cultivation have originated as chance seedlings. Someone found fruit growing wild and planted it in the orchard or garden. The chances are that most of these seedlings are crosses between varieties. In plant-breeding work at the present time the usual method is to cross varieties of standard sorts with some definite aim in view, and then to select the seedlings that arise from these crossings. I cannot take time to tell in detail how this crossing is done.

With this rather lengthy introduction to show the need of new varieties, we come to a discussion of some of the new fruits now being offered fruit growers.

APPLES.

Cortland is now receiving more attention from Apple growers than any other new variety. Three remarkable assets may make it a more valuable commercial variety than McIntosh with which it must be compared. These are: The Apples hang on the trees splendidly, whereas those of McIntosh are prone to drop when fully ripe or with a heavy wind. The crop matures from two to four weeks later than that of McIntosh and will keep that much longer than the product of the better known variety. Third, Cortland stands the wear and tear of going to market better than McIntosh. In size, flavor and color there is little difference between the two.

Three other seedlings of McIntosh are noteworthy. Early McIntosh ripens with or a few days later than Yellow Transparent. It is even more beautiful than McIntosh, and the

A Nectarine is a smooth-skinned Peach. In Europe the Nectarine is as popular a fruit as the Peach, but in America it is grown largely only in California. Easterners have not been successful in growing it because the curculio takes terrible toll from this smooth-skinned fruit. Moreover, no one has ever attempted to breed varieties of Nectarines for American conditions. Had we a list of American-bred Nectarines as we have of American-bred Peaches, the Nectarine might be as popular a fruit in this country as the Peach.

The New York State Fruit Testing Association is now offering **Hunter**, a sort which originated on the grounds of the Experiment Station, as a better Nectarine than any of the thirty or forty European Nectarines with which it must compete. The fruit is large, yellow fleshed, yellow skinned with a blush, and the flesh is juicy, fine grained, tender, sweet, and free from the stone. It ripens in September. This Nectarine can be

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grown and probably will grow well wherever the Elberta Peach thrives.

Plums.

Plum growing in eastern America for one reason and another is on the wane. This industry is in great need of newer and better kinds to commend it to commercial growers of fruits. Four kinds on the Station grounds are worthy of note. **Beauty** and **Santa Rosa** are new sorts of the Japanese type introduced by Luther Burbank. Both are remarkable for the reddish color in the flesh. **Beauty** is suitable for home use, while **Santa Rosa**, because of its productive trees and hand-

some, well-flavored fruits, may prove of considerable commercial value.

President is a large, reddish-purple, European Plum which ripens in early October. The sort is noteworthy on account of its late season. It originated in England, and was first fruited in 1894.

Hall, produced at the Geneva Station, is a large, reddish-purple, Prune-shaped Plum of the very best quality that ripens about the middle of September. It is well worthy of trial for both home and commercial orchards.

CHERRIES.

Three new Cherries promise well for one purpose or another.

Seneca is a very early black Cherry with tree and fruit much like those of **Black Tartarian**, the fruits of which ripen at least two weeks earlier.

Abundance is a seedling of the well-known **Napoleon** with fruits which hang later and are less subject to cracking and rot.

Giant is a very late black Cherry with firm, meaty flesh, exceptionally promising in both tree and fruit. Both **Abundance** and **Giant** originated with Luther Burbank.

GRAPES.

Of the several white Grapes which have originated on the ground of the Geneva Experiment Station, Ontario is probably receiving most favorable comments.

Portland is another early white Grape, splendid in its fruit characters, but a little capricious in growth of vine. These two kinds are splendid sorts for home and roadside markets.

Sheridan, a black Grape, a little later than **Concord**, gives promise of being a competitor of the **Concord**. It surpasses its well-known rival in both vine and fruit, and it only remains to be seen whether it is as hardy and whether it is adapted to as many different soils and climatic conditions as **Concord**.

Brocton is a new white Grape, ripening with **Niagara**, with even handsomer and better flavored fruit.

Dunkirk is a red Grape, with medium-sized clusters and berries and quite as attractive in appearance and quite as high in quality as the well-known **Delaware**, which fails as a commercial sort because of its small clusters and fruits.

RED RASPBERRIES.

The great need in small fruit culture is a red Raspberry resistant to mosaic, a disease that now threatens to exterminate the industry of growing this fruit. **Herbert** and possibly **Newman** are the sorts now most resistant to the mosaic.

June, Ontario, **Cayuga**, **Seneca** and

Owaseo are all new red Raspberries introduced from the Geneva Experiment Station with splendid qualities of plant and fruit, but all quite too susceptible to mosaic. **La France**, a new sort much talked about, is so similar to **Erskine Park**, with which it may be identical, that it is not worth adding to our list of red Raspberries. **Victory**, said to be a seedling of **Cuthbert**, is indistinct from its parent on the grounds of this Station.

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Van Fleet, highly recommended by some, is without value as grown at Geneva.

STRAWBERRIES.

Beacon, **Bliss** and **Boquet**, sorts now being distributed by the Fruit Testing Association, are receiving favorable comments on all sides. The berries are large, handsome, and of good quality. The plants are vigorous and healthy. All three sorts have considerable merit for commercial canning. All are worthy of trial for either home or commercial plantations.

New Varieties of Almonds

Valuable Hybridising Work.

SOME time ago the following statement was made to me by one of the country's foremost Almond specialists: — "When seen from all angles none of our commercial Almonds rate more than 40 per cent., considering the ideal Almond is 100 per cent." There is, no doubt, a great deal of truth in the statement, writes Mr. M. J. Heppner, Division of Pomology, University of California, for it is a well known fact that the nut characteristics of a certain variety may be satisfactory, but some tree characteristic appreciably lowers the value of the variety. In other words, the nut may be of good eating quality, good in size and well shaped, but the tree may be an early bloomer, low producer, poor grower, nuts mature too late, susceptible to disease, etc. It is characteristics such as these, that account for the low percentage given our commercial varieties of Almonds when compared

With the hope of raising the general all around value of our Almonds, an Almond breeding experiment was started some years ago by the Division of Pomology, University of California. Crosses were made between various varieties of Almonds, and the resultant nuts planted, developed into nursery seedlings, and finally were planted in orchard form. The object in mind for undertaking the experiment was to endeavour to produce a variety of Almond that was a prolific bearer of good quality nuts, and which possessed late blooming habits.

Frost is one of the greatest hazards the California Almond grower has to contend with. It was thought that if a late blooming good quality Almond could be developed the time and energy expended in carrying out the work would be well paid for.

Owing to the fact that a period of years is required for bringing a fruit tree into bearing, an experiment dealing with crossing varieties naturally consumes a long period of time, before any material evidence can be collected as to the value of the resultant trees from such crosses. The formative stage in the trees has now passed, and at the present time there are approximately 1,000 Almond trees growing at Davis, with known parentage, each tree having produced at least one crop of nuts.

Although the experiment is yet in its infancy, several interesting points

have been noted, among which are the seeming resistance to red spider attack exhibited by the trees derived from one of the crosses, the precocious bearing of certain trees, the high quality of nuts produced by certain crosses, and, lastly, the late blooming characters secured by crossing two late blooming varieties. In order to intensify these various characters, crosses will be made back to the original parents, and another generation of trees thus developed.

It is hoped that within the course of a few years a new Almond or Almonds will be offered to California fruit growers to replace the varieties now being grown, which will possess the many desired characteristics.

[It is in the work of hybridising and breeding out faults that America is so far ahead of Australia. This country needs new varieties adapted to its climate and soil. Instead of depending on chance seedlings, this, and other important research work, should be undertaken on scientific lines, and consistently followed up.—Ed. "F.W."]

WHAT ALMOND GROWERS CAN LEARN FROM SPAIN.

I was recently asked what Almond growers could learn by visiting Spain, writes W. L. Howard, Division of Pomology, University of California, U.S.A. The first thought of the traveller is that all their methods are from one hundred to five hundred years behind the times. In other words, their methods are very primitive. Still, they get results.

The one outstanding lesson that we might learn from the Spanish Almond grower is that it is possible to follow one tree generation after another on the same land over a period of centuries, and still keep up the fertility of the soil. This is accomplished by manuring and intercropping with legumes. Their Almond trees do not live to any very great age, and so far as I could see, they are not especially fruitful, but they do live long enough and bear well enough to make the industry reasonably profitable. As a rule their varieties are very inferior to ours. In fact, I saw very few good table nuts. Their strong point is growing hard-shell Almonds in large quantities for cracking purposes. While they use machinery

for cracking some of their more common types, the real high grade nuts like their "Jordan," are cracked by cheap hand labor.

In point of quantity, a majority of the Almonds of Spain are grown on the island of Majorca, which is located out in the Mediterranean about 200 miles from the mainland.

APRICOT KERNELS.

Big Trade Possible.

Danish Expert to visit Australia.

The Commercial Officer, Australia House, London, informs the Department of Markets and Migration, Melbourne, that an interest has recently been manifested in supplies of Apricot kernels. It is understood that a representative of a Danish firm proposes to proceed to Australia with the object of organising the trade by buying unshelled kernels from the producers and arranging for their shelling and export to Denmark.

In the latter part of the nineteenth century, a great demand arose in Europe for Apricot kernels, which encouraged the planting of large orchards in various countries, and particularly in Syria, writes Mr. A. Grasowsky, Sub-inspector of Agriculture and Forests, in the "Commercial Bulletin" of the Government of Palestine. He adds:—

The kernels were shipped to Germany and France. Consignments sent to Germany were in demand for the fixed oil, but those sent to France were more valued for the agreeable volatile oil. Damascus still exports yearly about 1,500 tons of kernels, mainly to Germany.

Apricot pits removed from the fruit in the cannery or in the fruit shed, are dried in the sun. They are then taken to the cracking machine and the shells broken. The kernels are separated from the shells and dried. The percentage of kernel to pit varies from 21 to 24 per cent. according to variety. The dried shells are sold as fuel. The kernels are used for the production of fixed oil, volatile oil, and macaroon paste. The fixed oil is extracted either by pressure or by means of such solvents as carbon bisulphide and ether and chloroform. This oil is used in medicine for the preparation of emulsions, in soapmaking and for cosmetics, and as a salad oil, mainly in the canning of sardines.

The volatile oil is extracted by the process of maceration and distillation. This is mainly done in Grasse (France). This oil is used in perfume production, in confectionery, and, for the sedative action produced by traces of hydrocyanic acid, in medicine.



Fruit buying in bulk is a risky business at any time, but when large quantities must be bought and distributed to the farthest corners of the State the risk is increased. Detailed organisation and careful management have eliminated a great deal of the risk so far as the Victorian Railways fruit stalls are concerned. So states the "Victorian Railways Magazine," which continues its interesting story as follows):—

WHEN a traveller buys fruit from the stalls of the Victorian Railways Department, he has a reasonable guarantee that the fruit is of the best quality—it is fresh, of good size, and in the best possible condition.

Perhaps that traveller does not realise the care and attention which have been paid by the experts of the fruit section of the Railways Refreshment Services to ensure this A1 service. He does not know that there is a special staff whose sole object it is to buy the fruit, distribute it, and to leave no cause for complaint.

Of course, accidents do occur, and mistakes are made, but there is a constant striving to eliminate these.

The departmental bulk fruit store is in the Viaduct Buildings, adjoining Queen's Bridge, Melbourne, and it is there that the quantities of fruit are bought, stored, and later distributed to the fruit stalls in every corner of the State.

First-class Oranges are a feature.

Orders arrive by telegram every morning from all centres, and the fruit

is consigned on the first available train; fruit is always delivered on the day of ordering. Careful organisation is necessary to ensure that sufficient stocks are consigned for special occasions, such as at Bendigo to cater for the huge crowds who attended the Railway Picnic on October 10, or for sporting or other fixtures elsewhere.

Oranges, which are a feature of the Victorian railway fruit stalls, are bought direct from Victorian growers. On arrival at the bulk store, they are carefully graded, inspected as to quality, and allotted positions, according to the degree of ripeness, ready for despatch.

A stock of between 300 to 500 cases of fruit is constantly maintained at the bulk store. Apples are bought at the beginning of the season and placed in cool storage, so that there may be a regular supply until the next season. Bananas, Passion fruit, and many other varieties are also bought in huge quantities, orders being lodged with the growers months in advance.

A Fruit Appetite Has Been Created.

It may interest you to know that from 600 to 800 cases of fruit are consumed each week by travellers and the general public who patronise the railway fruit stalls. In addition, large quantities are supplied for the dining tables in the refreshment rooms and for cooking in the many kitchens supplying those rooms, also to the dining cars.

It is the endeavour of the Manager of the Fruit Bulk Store (Mr. A. W. S. Maggs), an expert with experience in

growing, packing, and wholesale and retail fruit selling, to maintain three varieties of fruit on all the railway refreshment rooms' tables. In the dining cars up to five varieties are always on hand, though the supply is increased everywhere in the fruit seasons.

Reduction of loss on account of waste has become quite a science in the fruit section of the Refreshment Services, and Mr. Maggs has brought into operation a special rack for the transport of Peaches from the grower to the store. The Peaches are laid in single rows on trays so that no weight rests on the fruit; five of these trays are placed in a special rack and precautions taken concerning packing. Rocking or rolling of the train cannot affect the fruit. It is landed in practically the same condition as picked from the tree.

Growers who supply the Victorian Railways are now fully conversant with departmental requirements as to packing, grading and branding of the cases, the size, number and name of contents being stated on each case.

All the fruit on the Victorian Railways fruit stalls is sold by the dozen. This has proved the most satisfactory method. It enables the purchaser to see what he is buying; it saves time weighing and giving change, and it means that fruit of a uniform quality and standard is supplied in each purchase.

Reference to the Railways Fruit Stalls would be incomplete without mentioning the

sale of fruit juice

to the public. This has become quite a feature.

Only the best quality Oranges are used for these drinks. It has been found by experience that these Oranges contain the largest quantity of juice; to use cheap Oranges only retards work at the stall because it means cutting more Oranges and more handling at the electric extractor.

Oranges for Drinks.

Some idea of the popularity of this fruit juice service is indicated by the fact that during the summer it is common for the stall on the main concourse at Flinders-street station to use 20 cases of Oranges for drinks in one day.

All fruit juice drinks are prepared in the presence of the customer. There are two electric extractors at Flinders

"Scarecrows."

(By George A. U'Ren, Patent Attorney, "Henty House," Melbourne.)

TO prevent birds attacking his fruit, an orchardist must be observant and study their instincts and habits. The inventive mind is inherently observant. Many birds are cunning, and quickly perceive the operation of mechanical contrivances, and become accustomed to them. This, however, should only serve to galvanise the inventive brain into greater activity.

This article will endeavour to show how the man who protects his ideas has regarded the subject. The disclosures have been taken from Commonwealth patent specifications available to the public.

The earliest scarecrow for which a patent was granted under the Commonwealth Patents Act consisted of a spindle carrying a wheel, having a series of crackers or explosives attached to its periphery. The wheel was rotated by the descent of a float in a water tank, a drip tap being provided to regulate the water level. The device employed a lamp adapted to fire the explosives by touch paper, the arrangement being such that the explosion was effected in an empty chamber to magnify the noise.

A somewhat similar idea provided a series of Chinese crackers suspended by their wicks from a slow fuse. As the wick of each cracker ignited, it fell into a wire mesh chamber and exploded therein, thereby increasing the noise and utilising the resultant smoke.

To avoid the use of crackers a series of pistol barrels have been suggested. These have been loaded with gunpowder and suitably spaced apart, and connected by a fuse so that they have exploded in succession. Baffle plates have been utilised to prevent the flash of one barrel exploding the others. A somewhat analogous idea provided a series of striking bolts successively released by clockwork, and adapted to explode suitable cartridges.

All of the foregoing have relied upon noise. An arrangement has been produced, however, to utilise bright plates or mirrors connected with springs, or the like, so that when attached to the boughs of trees and swaying with the movement thereof, light rays are reflected. Devices adapted to produce a sound when hitting each other have also been proposed for use in conjunction with the light flashing devices.

The usual type of scarecrow has been developed. In this contrivance

a framework representing the human figure has been mounted upon a vertical pivot pin or needle point in such a manner that the figure has dipped, turned, and pivoted freely in a light breeze.

An apparatus has also been produced consisting of a column having mounted thereon a rotatable tubular cross arm. A vertical vane is rotatably mounted at each end of the cross arm, and carries a rattle consisting of

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a tube filled with ordinary bird shot. The column or framework may be adorned with a head and mask, and clothing. The vanes are opposed, one being up and the other down, and are rotated by the wind by which the whole apparatus may also be revolved.

Objectives of invention should be efficiency, cheapness, and simplicity. The inventors of the foregoing are not being criticised in this connection. There are, no doubt, many other ways of scaring birds away from the orchard. Continuous surprise would appear to be necessary, and from the foregoing it becomes apparent that scarecrows are worthy of careful consideration.

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street, one at Princes Bridge, and one at each of the other important stations in Victoria. So great was the demand at Flinders street last year that two more are being installed, and the stall accommodation has been extended.

By this brief survey of the work of the Railways Fruit Stalls, it will be seen that the Department has gone to endless trouble to ensure that first-class service which it is endeavouring to render in every branch of railway operation.

The man who does not think, or who perhaps, does not know of this work, may be prone to declare that the Department is operating the fruit stalls with the sole object of making huge profits. This is not the case. Good service is the first objective—constant striving to "get over" the idea that only the best fruit will be served at reasonable prices.

Evaporation After Irrigation.

More Cultivation, Less Water: The Value of Windbreaks

CAREFUL EXPERIMENTS are being made by experts into the subject of irrigation and the subsequent evaporation of water. The Agricultural Experiment Station of Arizona, U.S.A., has recently issued a Bulletin (No. 101), in which it is stated that the direct evaporation of water from the ground surfaces may account for 10 to 40 per cent. of the water applied. This loss, continues the report, is much larger on heavy loams and adobe soil than on sandy soil. It is greatest, of course, during and just after each irrigation and decreases gradually until the next irrigation. In the case of Lucerne it is comparatively high after each cutting and decreases as the plants grow again and shade the ground. It is greater on an open, wind-swept area than on one protected by windbreaks.

Many methods for reducing the evaporation loss are available to the farmer. They are as follows:—

1. **Deep Ploughing.**—A shallow seed bed underlain by packed soil tends to cause a high evaporation loss. From 7 to 9 inches of soil should be turned over by the plough.

2. **Cultivation.**—In the case of crops planted in rows, such as corn, the ground between the rows should be cultivated as soon as possible after each irrigation. In the case of orchards the ground should be furrowed just before irrigating and cultivated soon afterwards. If the furrows are 6 inches or more in depth one may expect to save a considerable percentage of the loss which would occur without the mulch. Even Lucerne needs cultivation at least twice a year, and particularly after the soil has been packed by winter pasturing.

3. **Increase in Soil Fertility.**—It is difficult to make a mulch when humus is lacking. A fertile soil takes water readily, and if mulched on top retains it with comparatively little loss by evaporation. Straw should be spread on the ground and ploughed in. Weeds, trash, and green manure crops can be utilised to improve the fertility. All stable manure should be spread and ploughed into the soil.

4. **More Thorough and Less Frequent Irrigation.**—This practice, besides saving water, tends to establish deep root feeding, whereas frequent light irrigations encourage shallow

roots. For Lucerne one irrigation per cutting is ample except for sandy soils, where two lighter irrigations are usually necessary.

5. **Irrigation at the Right Time.**—Irrigate heavily before planting and withhold water after the planting for a considerable time. In the case of Lucerne irrigate about a week before cutting. This will supply the water when it is most demanded for plant growth, and after cutting, the ground being still moist, the new crop will spring up quickly and shade the ground. Wheat should be planted in thoroughly irrigated ground, and with the aid of good winter rains no irrigation is needed until the boot or

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flower stage. Cotton should be irrigated sparingly in the early stages of growth.

6. **Irrigation at Night.**—Evaporation is much restricted in the night as compared with the day time. It is a great mistake to shut down pumping plants each evening.

7. **Elimination of Weeds.**—The waste of water to raise weeds should be included with evaporation losses. Weed farming is unprofitable.

8. **Windbreaks.**—They should be planted along the roadsides. Every farmer should raise his own fence posts and firewood. Wind movement is greatly reduced by the long rows of trees with which the landscape is dotted. The near-by fringes of fields require additional fertilisation, but the net result of windbreaks is beneficial.

"THE CHERRY IN NEW SOUTH WALES."

Cherry Stocks.

A very informative and instructive article on Cherry culture and production appeared in the "Agricultural Gazette" for New South Wales of February and March last. The article is extensive, and deals with all phases of Cherry culture, but by far the most important feature discussed is the question of suitable stocks. Originally the only stock used was the Kentish, and the author, Mr. W. H. Brown, mentions some trees worked on that stock in the Young district, which are sixty years old!

Thirty years ago the Mazzard began to attract attention as a stock, and as a result there were extensive plantings of trees on the Mazzard. The author then says that the "discovery that this wholesale use of the newer stock was an error, has been an expensive business, for the Mazzard has not only proved slow to come into bearing on practically all soils, but excessively slow on many heavy ones." He states further than trees on Mazzard exhibit a tendency to die back after they have carried very few crops.

As a result of these serious disabilities, there is a tendency, in many districts, to revert to the Kentish stock. In some districts, the use of Kentish seedlings for stock is becoming general. The seedlings exhibit a very fine root development, the roots going deeply down into the sub-soil. On the other hand, suckers rarely produce a deep rooting system. The drawback is that Cherry seed is considered very difficult to germinate.

Another important point discussed is the selection of suckers, the author urging that only such suckers which give a good root development should be chosen for propagation work. A frequent cause of failure of trees is the weak rooting system of the stock.

The author recommends the use of the Kentish stock for the heavier soils, while only certain varieties should be worked on the heavy stocks.

The third stock discussed is the Mahaleb. This stock has a dwarfing effect on Cherries, and is only recommended for one variety, the Early Purple Guigne.

The following varieties are recommended on the stocks named:—

Florence, St. Margaret, Noble, Black Republican, and Biggareau Pellissies on Kentish.

Early Lyons, Eagle's Seedling, and Bedford Prolific on Mazzard.

Early Purple Guigne on Mahaleb.

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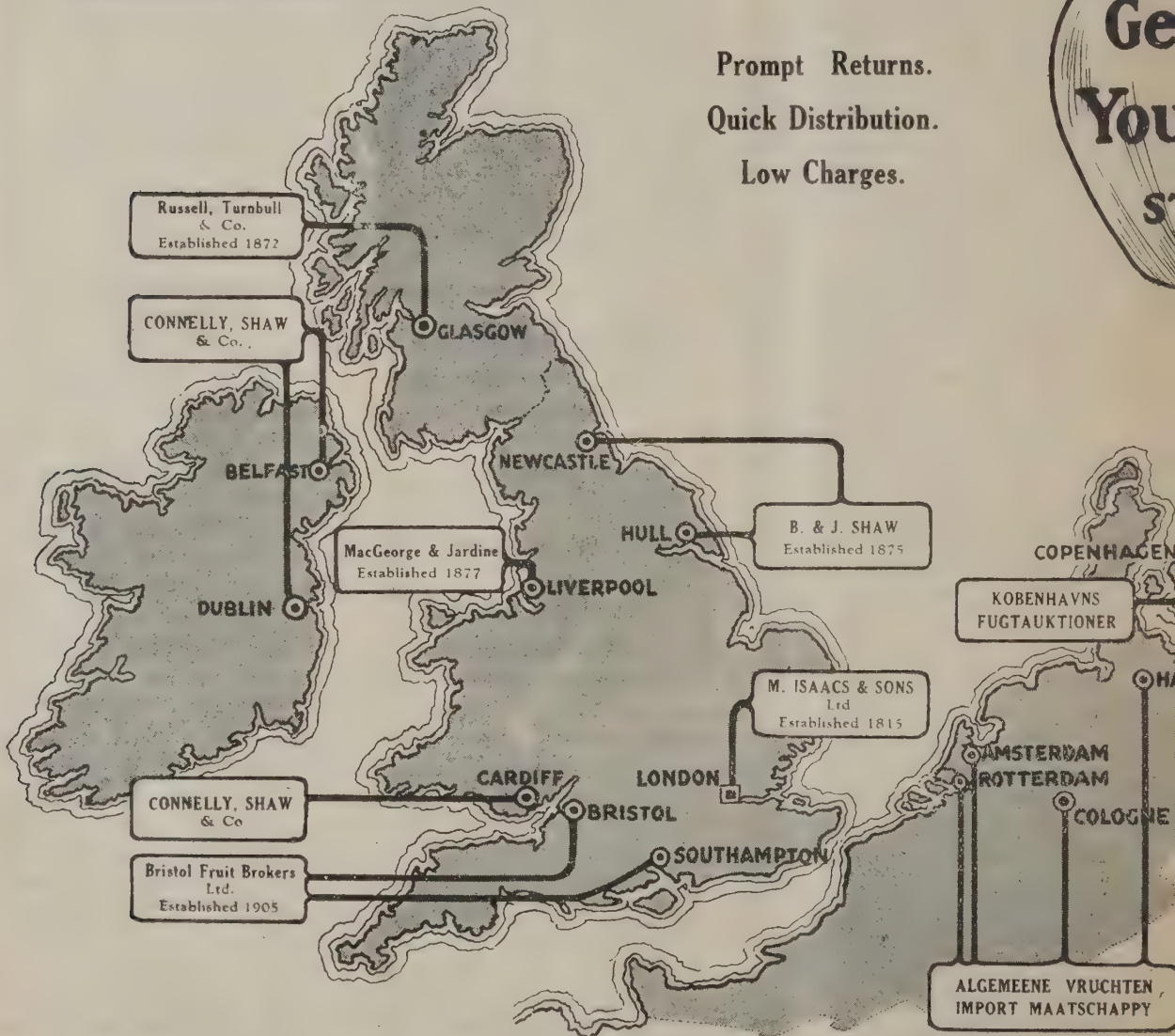
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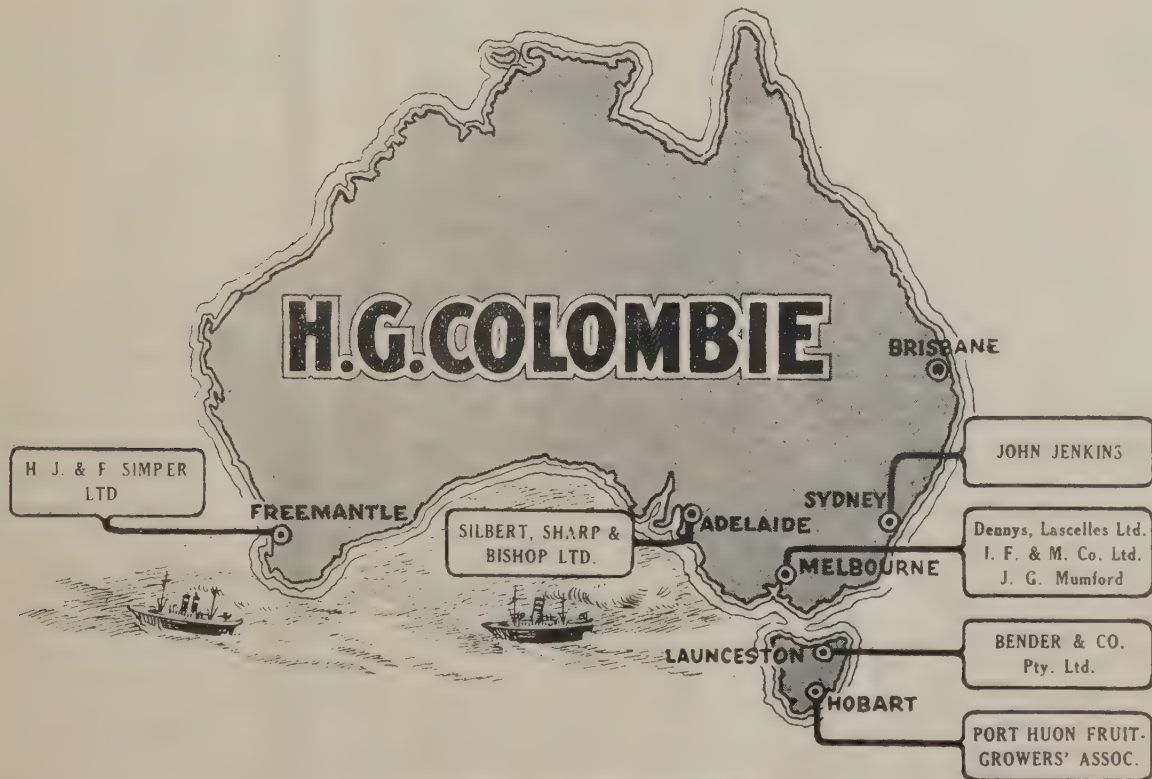
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Cold Storage In Australasia

Cold Storage of Pears.

Results of Experiments.

*Paper read at the Annual Congress of the Fruitgrowers Cool Stores Association of Victoria.

(By J. E. Harrison, B.Ag.Sc., Department of Agriculture, Victoria.)

THE EXPERIMENTS in the cold storage of Pears carried out in this country can be divided chiefly into three classes—

- (a) Temperature tests.
- (b) Maturity tests.
- (c) Variety tests.

The same may be said of experiments in other countries, though in England a little work has also been done by Luthra on the influence of humidity. Mention of this will be made later.

In America, the question of pollination, too, has not passed unnoticed, and some interesting observations on this point have been recorded. The results of all temperature tests appear to be well known, but are very difficult of application in large holds and chambers. In fact, one can safely say that the control of temperature is by no means efficient, and is open to considerable improvement. Many of our storage losses, both in Pears and Apples, would appear, too, still to be due to unsuitable temperatures. When we can control temperatures better throughout holds and chambers, we shall have gone a long way towards minimising losses in storage.

California Favors 30-32 deg. F.

As our own experiments in Pear storage have been limited to the last few years, a summary is given of the conclusions of American investigators, particularly those of Overholser and Latimer, of the University of California. A temperature of 30 deg. F. has been found to give best results with Pears picked at a proper stage of maturity. Commercial cold storage men, however, have hesitated to employ a temperature of 30 deg. F., owing to the fact that, with the difficulty of closely regulating the temperature uniformly throughout large rooms, the range for temperature fluctuations is limited. From this view-point, a temperature of 32 deg.

F. has been found most satisfactory. It has been noted that immature Pears kept better at 36 deg. than at either 30 deg. or 32 deg. F. This proved true with the varieties Howell, Vicar, and Bosc.

As regards the stage of maturity at which to pick for best results in storage, most investigators have concluded that the general fault in America is to pick too green, and that the result is the fruit tends to rot at the core. By leaving the fruit on the tree two weeks longer than is practised for commercial picking, the life of the Bartlett Pear in storage has been extended by six or seven weeks.

The most definite recommendation in regard to the Bartlett is given by Magness, who is very emphatic about the importance of maturity. He says, "If the highest quality is to be secured, Pears for canning should not be removed from the tree until they show a pronounced yellow colour. If fruit is to be held in cold storage, it should be allowed to come to the stage recommended for cannery picking before removing it from the tree. Early-picked fruit has a marked tendency to scald in cold storage." This stage is more advanced than we ourselves advise, but I quote this American recommendation, as it supports our own experience against picking Pears in an immature condition. It has been found, also, by Overholser and Latimer that the loss in weight during a ripening period of 20 days is greater in green fruit than in fruit just mature. It would appear, then, that a grower will reap a double advantage by delaying the harvest—he will have less loss through scald and core rot, and less loss in weight during ripening.

Varieties found most susceptible to scald or browning of the skin have been Bartlett, Louise Bonne, Beurre Clairgeau, Duchesse de Bordeaux,

Vicar of Winkfield, Pound, Beurre Hardy. The varieties which have exhibited considerable resistance to the development of scald are Easter Beurre, Forelle, P. Barry, and Beurre d'Anjou.

Overholser and Latimer found that cross-pollinated Bartlett Pears matured earlier than self-pollinated specimens, and this occasionally indirectly affected the keeping quality. They state that apparently cross-pollinated Pears are ready for picking about two weeks earlier than self-pollinated ones.

The effect of climate has been investigated to some extent by Wagness, who found a wide variation in the length of time the fruit from different districts held up in storage. "In general," he says, "the districts with relatively high temperatures and low humidity during the growing season produce Bartlett Pears with the best

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carrying and keeping qualities," i.e., the best fruit for storage is grown in hot, dry districts. He points out that observations indicate that the same holds good for many other deciduous fruits, though not necessarily in the same degree as with Bartlett Pears. To quote his own words, "Plums, Prunes, Cherries, Apricots, and other fruits seem to show a similar tendency toward poor-keeping quality when grown under particularly cool conditions."

This bears out our own Victorian experience, and though the subject has not been investigated in detail, it is becoming recognised that fruit from one district varies in its keeping quality from fruit of another district. If climate is such an important factor, then growers in the cool moist districts will need to watch the seasons, because they cannot store with the same safety in a wet season as in one mild or relatively dry.

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As regards humidity, Luthra (England) kept Pears in moist air and in dry air, and found that in dry air there was greater loss of weight, accompanied by wilting and earlier break-down. In moist air, on the other hand, the Pears maintained a healthy greenish-yellow colour, and kept much better. No experiments were made, however, with varying percentages of humidity.

Victorian Department's Experiments.

Experiments by the Victorian Department of Agriculture made so far confirm in the main the results of American tests. We have found that some varieties are more susceptible than others to blackening of the skin—Keiffer and Williams (Bartlett) being particularly so. With both these varieties blackening has been worse at 34 deg. and 37 deg. than at 32 deg. As far as maturity is concerned, it has not been conclusively shown that green fruit and yellow fruit both blacken more in storage than that just on the turn, but it appears fairly definite that Williams Pears at the green stage blacken earlier and worse than fruit just turning.

The effect of temperature upon mould development has been shown to be definitely less than 32 deg. than at

either 34 deg. and 37 deg. The investigation of core-rot has not met with success, but it appears to be a natural break-down, to which some varieties are more subject than are others. For instance, it is well known that the Jargonelle may develop core-rot on the tree. Winter Coles are very susceptible to the disease in storage, and Pears from young trees of most varieties usually break down readily.

Hereunder is a summary of the results, hitherto unpublished, of a maturity and temperature test with Williams Pears.

The tests involved two consignments—the first lot was sent on 18th February and the second on 25th February. The fruit of the first consignment was not so mature as that of the second, which was in a marketable condition, being fully grown, but still firm and greenish in colour.

Each consignment consisted of three trays, and on arrival at the cool stores, one tray was stored at 32 deg., one at 34 deg., and the third at 37 deg.

On various dates a row of fruit was removed from each tray, allowed to ripen at room temperatures, and then examined for colour, flavour and texture.

If we first examine the results as influenced by maturity, we find that on 9th April (eight weeks' storage) there was little difference between the fruit of the two consignments. After ripening, however, that of the second picking was somewhat better in flavour than the first.

On 23rd April, after ten weeks' storage, an examination showed that the fruit of the first picking, stored at three different temperatures, had all commenced to wilt, and that the Pears were rather tart to the taste. Those of the second picking were superior, having a better taste, and not being wilted.

On 9th and 28th May, the same difference in flavour and texture was again apparent in all sound fruit, those of the second picking being distinctly superior. As far as blackening was concerned, it appeared to take longer to develop in the second picking, but eventually to develop to the same extent in both lots.

If we next examine the results as influenced by temperature, we find that, even after eight weeks' storage.

the fruit at 32 deg.

gave the best results, and that, as time went on, the Pears kept at the

lowest temperature showed more and more to advantage. Blackening appears simply to be delayed by low temperatures, but eventually to develop to the same extent as at high temperatures, unless the fruit first succumbs to mould or some other agency.

A survey of the above results for each consignment suggests the later picking and the lowest temperature as factors that enhanced the keeping quality of the Pears. The fruit picked early commenced to show wilting after from nine to ten weeks in storage, and such fruit kept even at the lowest temperature evinced a more rapid browning of the skin than the fruit picked later. Its flavour throughout was only fair, tending to

ture control in large chambers and holds. That there are variations is easily discovered by arranging throughout a chamber a set of bottles filled with salt solution and taking thermometric readings in the mornings before opening up, particularly when a chamber happens to have remained closed for a few days.

The problem of loading, in order to avoid an extremely low temperature, for lots of fruit stored early in a chamber, is one well worth considering. For instance, one lot may be stored early in the season close to an inlet duct and rapidly become cooled. A few days later a second lot may be stored in the same chamber, but away from the inlet duct, and cause an increase in the temperature of some parts of the chamber without in any way increasing the temperature of the first lot of fruit near the inlet duct. As a result, when an extra volume of cold air is introduced the first lot may be subjected to too low a temperature, and, as I have already mentioned, many of our losses, both in Pears and Apples, would appear still to be due to injuriously low temperatures. Then, again, pockets of warmer air may exist owing to protection of some sort against air currents, and a lot of fruit may suffer the ill effects of too high a temperature. From these considerations it appears wise to load a chamber from the outlet duct towards the inlet duct, making allowance as usual for lateral and vertical air currents.

It is desirable, also, that fruits requiring a slightly lower temperature than others should be stored nearest either the coils or the inlet duct. Thus, where Pears and Apples are in the same chamber, the Pears should be stored in the coldest part, and where, say, a chamber is filled with Apples only, the Jonathan Apples should be stored away from the coils or the inlet duct, in places of more moderate temperature.

Since there are these variations within a chamber, the question arises as to where

a constant temperature

should be maintained. The answer appears to be—where the temperature is lowest. For instance, in chambers cooled by air circulation, there are three places where the engineer may seek to maintain a steady temperature, firstly, at the inlet duct; secondly, in the centre of the chamber; and, thirdly, at the outlet duct. Differences of several degrees may be found between each of these places, according to whether loading is in pro-

gress, or whether the chambers are being opened frequently or not. From inquiries into the methods of engineers, it is likely, I think, that most injuries which occur as a result of low temperatures are brought about early in the season, when an effort is being made to get the temperatures down. For this reason, it is recommended that the temperature of the incoming air should be carefully controlled, and that it should not fall as low as the freezing point of the fruit, which for most varieties is about 28 deg. F.

If it is desired to cool a chamber down rapidly, this should be accomplished rather by increasing the volume than by lowering the temperature of the air passing into the chamber.

In chambers cooled by direct expansion, there are, perhaps, greater variations still than in chambers cooled by air circulation, and some method of creating air currents appears to be necessary. Temperatures near the coils and on the floor will always be found lower than in other parts of the chamber. At times, differences of 5 deg. F. have been found in a small chamber. These differences would sometimes appear to be due to errors in construction, such, for instance, as having the coils running from the floor upwards instead of from the ceiling downwards.

Various means suggest themselves for securing circulation of the air and a more uniform temperature throughout such chambers, and no doubt a satisfactory method could easily be devised.

Finally, it is recommended that that essential instrument, a standard or a standardised thermometer, should be in use in every cool store. It is indispensable to the engineer in his difficult task of maintaining his temperatures and preserving every Apple and Pear to the complete satisfaction of all his patrons.

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be tart and dry, and its texture was rather hard, and woody or gritty. A temperature of 32 deg. preserved both lots of fruit for from thirteen to fourteen weeks, when browning developed, particularly in the lot picked early.

At present, perhaps the work which offers most promising results is a thorough investigation into tempera-

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Apple Storage Investigation.

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Jonathan Spot and Soft Scald: What is the Correct Packing Maturity?
Experiments with Oiled Wrappers.

Summary of Report by Professors H. H. Plagge and T. J. Maney,
Pomology Section, Iowa State College, Ames, Iowa, U.S.A.

SOME valuable research work on Apple storage diseases has been done by the pomology section of Iowa State College, Ames, Iowa, U.S.A. Results were presented recently in a fourth progress report on “Apple Storage Investigations,” prepared by H. H. Plagge and T. J. Maney.

To Professor Plagge, who is assistant in the pomology sections, we are indebted for a summary of the report, which was divided into two sections. Part I deals with Jonathan spot and soft scald, while Part II concerns Apple scald and internal break-down. Growers who decide from a reading of the summary that they wish to study the entire report no doubt may obtain a copy by writing Iowa State College for Bulletin 222.

Part I, Summary.—The summary of facts pertaining to Jonathan spot and soft scald follows:—

The investigation deals with the development and control of Jonathan spot, soft-scald and internal break-down, as these are affected by maturity of the fruit, cultural conditions, temperature, humidity, aeration and wrap treatments.

Storage temperatures had a decided influence on the development of Jonathan spot. Higher temperatures increased the disease. 32 degrees F. proved most satisfactory in its control.

More Jonathan spot developed at the higher humidities. However, a low humidity was found impractical because of the danger of fruit becoming shrivelled. A relative humidity of 80 to 90 per cent. is recommended.

Variations in the size of the fruit did not have much influence on the development of Jonathan spot.

Varying the soil treatment did not

give a satisfactory method of control for Jonathan spot.

No definite relation was found between the development of Jonathan spot and mean temperature, rainfall, and sunshine for the growing season.

Common storage experiments compared with cold storage conditions showed that the time of storing is important. Comparisons between results with immediate storage and delayed storage emphasises that Jonathan can be held longer in cold storage than in common storage.

Immediate storage in most cases gave the least amount of Jonathan spot. This was true both for late picking and early picking.

Late picking generally gave the more Jonathan spot, but the time of storing was found more important than time of picking.

The tendency was for Jonathan spot to increase with delayed storage and in proportion to length of delay.

Jonathan spot was more severe during the latter part of the cold storage season and increased according to the time in storage. Jonathan should, therefore, not be held in storage longer than January 1.

A constant air movement of approximately seven-tenths mile per hour throughout the period of storage has given no advantage as a control measure for Jonathan spot.

It was shown that Jonathan spot cannot be controlled by employing oiled wraps.

Wrapping in oiled paper reduced the amount of shrivelling of the skin of the Apple. No deleterious effects resulted in the use of oiled wraps.

Maturity experiments with Jonathan showed that soft-scald is conditioned by the maturity of the fruit when placed in cold storage. Time of storing was more important than time of picking in controlling this disease.

Immature Jonathan soft-scalded worse than mature Jonathan.

Delaying at the orchard one week usually gave more soft scald than immediate storage, or delayed storage for periods of two or three weeks. Delay of two or three weeks gave the best control of soft-scald. Immediate storage is recommended, however, because delayed stored Jonathans are susceptible to Jonathan spot.

Aerating with ventilation completely controlled soft scald throughout one season. Aerating, or merely circulating the air within the storage room, did not give satisfactory control of the disease.

Oiled wraps did not control soft scald on Jonathan.

Soft scald occurred early in the storage season. It made practically no development after the normal cold storage season of Jonathan was past. Soft scald was considerably influenced by maturity conditions in the early storage period.

Internal breakdown was never a factor in the storage experiments where Iowa Jonathan were used.

Part II Summary.—Findings pertaining to Apple scald and internal breakdown were summarised as follows:—

Soil treatment experiments did not show wide differences in amount of Apple scald developing from year to year. Slight decrease in scald usually noticeable with the bluegrass sod treatment, was attributed to earlier maturity of the fruit.

Maturity experiments showed that Apple scald is largely conditioned by the maturity of the fruit when it is stored.

Grimes picked in an immature condition scalded badly. Those picked in a more mature condition were immune to scald.

Delayed storage usually decreased the amount of scald on mature fruit. This decrease was not always in proportion to the amount of delay.

Aeration did not control Apple scald. Aeration with ventilation likewise proved unreliable on fruit stored in a somewhat immature con-

dition. Only Apples which were in an immature condition when stored were benefited by aeration. The advantage of aeration was most apparent on unwrapped Apples.

Oiled wraps were far more effective as a scald preventive than aeration, and Apples in an immature condition responded best to this treatment. With Wenatchee-grown Grimes, oiled wraps controlled scald in all cases.

Apples scalded worse in wax wraps and in tinfoil wraps than in common paper wraps, or unwrapped Apples.

Artificial scald, produced by ethyl acetate and acetaldehyde, was delayed or entirely prevented by wrapping Apples in oiled wraps. Aerating Apples exposed to ethyl acetate greatly reduced the amount of scald.

Experiments with Grimes, considering maturity when stored, showed that the chances for the occurrence of breakdown increased with late picking as well as with delayed storing. Late picking with immediate storage was comparable to early picking with late storage in the amount of breakdown.

Scald prevention methods, wrapping in oiled wraps and aerating the storage room were not effective in reducing internal breakdown.

Differences in the rate of cooling between unwrapped, oiled paper wrapped and common paper wrapped Apples were slight and probably of no commercial significance. The rate of cooling of common, paper wrapped boxed Apples was approximately two-thirds that of tinfoil wrapped Apples.

Rate of increase in temperature of unwrapped Apples was approximately twice that of paper wrapped, and 1.6 times that of tinfoil wrapped. Differences noted in the rate of cooling between aerated and unaerated wrapped Apples were only slight.—“Better Fruit.”

EXPERIMENTS IN NEW ZEALAND

Causes of Flesh Collapse.

Messrs. N. McClelland and L. W. Tiller, of the Cawthron Institute, Nelson, New Zealand, make the appended preliminary report in connection with their experiments in the cold storage of Apples:—

“For several years fruitgrowers have had losses in fruit in cold storage from a disease known locally as ‘flesh collapse,’ the cause of which has not been definitely known, although both the Department of Agriculture and the Cawthron Institute have been working on the problem.

“It is known that under the storage conditions obtaining at present the maturity of the fruit at the time of picking is important, as immature Sturmers develop less flesh collapse than mature; it is evident, however, that storing immature fruit can only be regarded as a temporary measure since immature fruit is lacking in quality and liable to excessive shrivelling. It has also been shown that reduction of the humidity of the store air reduces the amount of flesh collapse, but the influence of temperature on the prevalence of the disease has not been definitely proved.

“Drs. Kidd and West, of the Department of Scientific and Industrial Research in England, have shown that internal breakdown is associated with storage at too low a temperature, and from descriptions and photographs of flesh collapse suggested that the two diseases were the same.

“The Cawthron Institute has now accumulated further evidence to show that flesh collapse is almost certainly identical with internal breakdown, which is known in America and Australia, as well as in England.

“While it may never be possible to prove the absolute identity of a non-fungal and non-bacterial disease in New Zealand with a similar disease in England, the writers’ experiments this year show that flesh collapse is more prevalent at low temperatures (32 deg.—34 deg. F.), even when the humidity is low (less than 60 per cent.); than at higher temperatures; at approximately the same temperature (about 34 deg. F.), however, with a high humidity there was even more flesh collapse.

“The temperature required for freedom from internal breakdown is probably about 40 deg. F., but it must be remembered that at the higher temperature, fungal activity is greater and losses from ‘rots’ greatly increase, also the vital processes of the Apple are quickened and the commercial storage life shortened.

“The question now arises as to what it is best to do, to raise the temperature high enough to avoid internal breakdown and have increased losses from ‘rots,’ or to slightly raise the temperature (above 34 deg. F.), keeping the humidity reasonably low, and have a small amount of internal breakdown without large losses from fungal diseases.

“This matter must be left to the cool store proprietors and fruitgrowers to decide for themselves.”

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Arsenic on Apples.

"Scare" in England.

Unfortunate Propaganda and "Panicky" Regulations.

It is regrettable that wide publicity has been given to the use of arsenate of lead for spraying fruit trees, and the suggestion of danger to the human system.

The Ministry for Health in London has drafted drastic regulations, and has threatened to condemn cargoes showing certain traces of arsenic.

On finding one hundredth part of a grain to the pound of Apples, an investigation would proceed, and if, on minute examination, one-tenth to the lb. were found, the cargo would be liable to be condemned.

The National Federation of Fruit Trades has urged the Health Ministry to take a commonsense view of the matter, but failing satisfaction there the High Commissioners and Agents-General are to be approached with a view to getting the drastic regulations modified.

Dr. McFadden, of the Health Ministry, is reported to have said that fruitgrowers must find other means than arsenical spraying to combat pests. He quoted from an advertisement in the "Fruit World of Australasia," wherein it was stated that arsenate of lead would not wash off.

When the storm blows over, as it will, the trade will flow on as before, and growers will continue to spray with arsenate of lead to kill leaf eating insects, despite the fads of Dr. McFadden.

Even if spray marks were left on Apples—and who eats the fruit in that condition?—one would need to eat a bushel or so at one sitting to do any possible harm. Many people peel the Apple before eating it.

The pity of it is the falling off in trade because the public easily get "panicky," and people refrain from eating fruit while the scare lasts.

Some years ago two children died after eating Grapes. Press publicity followed, and the spraying with arsenate of lead was blamed. Grapes became a drug on the market. Nobody would buy them. It turned out subsequently that death was caused from eating unripe fruit, and that the spraying had nothing to do with it. The fruitgrowers were the principal sufferers.

Let us hope that in England there will be a speedy return to sanity as regards this matter. We thought the "silly season" ended some weeks ago.

Fruit Show Committees, Note!

Fruit Show Committees might bear the foregoing in mind, however, and even if they decide that Apples on the Show Benches must not be "polished" the spray marks might be removed. It is all right to show the Apples "with the bloom on," though even this is a dubious advantage, but to allow spray marks to remain is neither nice nor wise.

Berry Fruit for Factories.

1925-6 Prices.

In answer to an inquiry regarding factory prices for berry fruits, a prominent Victorian factory gave the following figures:—

Gooseberries . . . £14/- per ton.
Raspberries . . . 5d. per lb.
Strawberries . . . 6d. per lb.

Mr. R. A. Routley, General Secretary of the United Berry Growers' Association of Victoria, Wandin Yallock, writes as follows:—

Strawberries.—The Australasian Jam. Co. Pty. Ltd. is paying for berries picked into special trays of their own providing, 6½d. per lb. They do not buy in bulk. Other factories were offering 5½d. in buckets or barrels. Owing to the shortage of these berries it is probable that they had to buy in greater quantities than they expected at the Victoria Market, and would probably pay a little more from necessity.

Raspberries.—The general price appears to be 4½d. in barrels. Growers would be doing themselves a good turn, if they could afford it in refusing to supply factories at all at this figure as it is far from payable. There should be at least another penny.

Gooseberries.—It is generally agreed that it is not profitable to sell these berries to factories, and I do not know any grower who is so doing. I believe it is a fact that pulp from Tasmania can be landed at the factory in Melbourne at the rate of £9 per ton. It would cost about that much to pick them in this State.

Logans and Black Logans.—The latter do not seem to be able to secure a factory buyer at any price, owing chiefly to the competition of the wild variety. For Logans the A.J.C. is paying 4d. in punnets (1 lb.), and not buying in bulk. Other factories are paying 3d. in bulk. This is not quite enough, and is ½d. under last year's price.

[With regard to wild Blackberries, attention has been frequently directed to this menace. This noxious weed is steadily encroaching on, and ruining, good land—especially Government property. The Blackberry pest spreads with amazing rapidity. Growers Associations and Shire Councils should take this matter up with vigor and determination.]

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Schedule of Prices.

Fruit is offered in case, half-case, and quarter case lots, the prices—including freight to purchasers' railway station—are as follows:—

Apricots, 10/-; "B," 8/- per bushel; Peaches (white flesh), "A," 10/-; "B," 8/-; yellow slips, "A," 8/-; "B," 7/-; yellow clings, "A," 9/- Pears, 9/- Plums (fresh Prunes), 8/-; light or dark, 7/- Seville Oranges, 8/- Grapes (White Walthams), 14/-; Muscats, 12/-; Purple Cornichon, 14/-; other dark, 12/- Apples, cooking or dessert), 8/6.

For half and quarter cases the cost is slightly higher in proportion.

The full scheme includes the co-operation of the station-masters in securing orders for case lots, particularly in country districts, but pending the completion of the necessary organisation the public has been invited to send orders direct to the manager, and the fruit will be delivered from a grower or packing shed.

The Shepparton Orchards' Products Co. Ltd. is working in conjunction with the fruit distributing scheme of the Government, but in addition to this the Government has guaranteed this Company the sum of £1,000 to develop its own trade.

"The method we are adopting to make use of this money," states the manager, Mr. W. Stewart, "is to open a series of depots in the Western District, on the line running from Geelong to Port Fairy. Our representative, Mr. J. R. Henderson, is already at work in that district, and we are hoping to sell large quantities of fruit, both wholesale and retail, including motor truck delivery to the seaside towns, within working distance of Geelong."

Are the Prices High?

Some growers are of the opinion that the prices quoted are on the high side, and it is thought that those who can sell at a lower figure will be advertising accordingly, as they have been doing for years past.

PERSONAL.

Mr. Percival J. Fryer, F.C.S., F.I.C., a noted English Entomologist, and author of several standard works on insect pest control, is now in Australia studying orchard and vineyard pests under local conditions, on behalf of Messrs. McDougall & Robertson Ltd., and Wm. Cooper & Nephews Ltd., the well-known manufacturers of spraying mixtures, sheep dips, etc.

South Australia.

Crop Prospects.

Apples Good (Jonathans Heavy). Pears Good. Grapes Very Heavy.
Fungus Diseases Absent. Prospects Good for Citrus.

Mr. Geo. Quinn (South Australian Government Horticultural Instructor), sends the following interesting report regarding fruit crop prospects in South Australia, the particulars being compiled at the end of November last.

Apples.—The Apple crop promises to be from fair to good according to variety, Jonathans being very heavily laden. The fruit and foliage are practically free from Black Spot, and the trees carry a fine healthy color, thanks largely to a very dry November month.

Pears.—Will be fair, the well-known Williams' showing good crops. There has been a heavy drop from most sorts other than this one. The fruit and trees are as yet free from fungus troubles.

Quinces.—Are reported as having set very heavily.

Plums and Prunes.—Will be light in all but a few isolated orchards.

Cherries.—Fair crop, but birds have been very bad in most districts. The foliage of the Cherry trees is being attacked freely by the Cherry Slug, and Black Aphides have again appeared on the terminal sappy twigs. The Slug is arousing attention amongst Cherry growers and doubtless liquid and dust sprays will be more freely resorted to than heretofore on this pest, which in the absence of Hawthorn hedges is not difficult to control if systematically handled. The Aphis (*Myzus cerasi*), appeared as a pest simultaneously all over the State in our Cherry trees for the first time last year, and growers are beginning to wake up to its possible injurious character.

Figs.—Are promising good crops.

Almonds.—Will be fair to good, most varieties other than Brandis having set pretty well.

Apricots.—Are from fair to light, and only in a few isolated orchards is there a good crop. The fruit is remarkably clean, as is the foliage also, and a good though scarce sample should be available to the canners.

Peaches and Nectarines.—Are very patchy right throughout all sections and varieties.

Grapes.—Generally are promising a remarkably good yield. A few sorts—Sultanas, old vines chiefly amongst drying sorts, and Mataro, and in some vineyards Doradillo are not so promising. The vines where well cultivated have never looked more healthy than at present. A dry spring has afforded no opening thus far for any fungus diseases to make a start. No Downy Mildew or Oidium (Powdery Mildew), has come under our notice, and anthracnose has been conspicuously absent in most areas.

On the whole the deciduous fruit and vine plantations look very healthy, the most marked feature thus far being the absence of fungus diseases.

The citrus trees are looking well, and generally speaking the setting of the Orange crop is good, but during the next month or so, many young fruits will be shed when the actual setting may be calculated with greater certainty.

Mr. J. B. Randell, Gumeracha, S. Australia, writes 24/11/25:—

The main fruits grown here are Apples, Pears, Plums. Apples (Jonathan, Cleos., Rome, London P., Stone P., Statesman, Spitzenberg, etc.). Pears (chiefly W.B.C. commonly known as "Duchess.") Plums (Golden Drop, Jefferson, President, Grand Duke, etc.), also D'Agen and several other varieties of Prunes.

Crop Anticipations.—Apples are showing for a good crop; ranging from medium to fairly heavy in most varieties. Pears are from light to medium, the blooming was on the heavy side, but in a good many orchards there has been a very considerable fall during the last few weeks. Plums are in most cases only medium, although some growers report a fairly heavy crop of some varieties.

District News.—Perhaps the most outstanding feature of this season's orchard outlook in this district is the remarkable

freedom from disease in Apple and Pear orchards. Up to the present very little sign of Fusidadium is to be seen. It is perhaps too soon to assume that there will be none; a week of dull and damp weather is being experienced now, and it

is possible that it may come in to some extent as the conditions seem to be favorable.

Spraying with arsenate of lead is the order of the day, and most growers are adding a little lime and sulphur or other fungicide with a view to checking any tendency to the development of fuscladium.

Cultivation of the orchards, and the preparation of the land for and planting of Potato and Tomato crops are also well in hand in most cases.

Association Activities.

Mr. J. Donaldson, Acting Secretary of the South Australian Fruitgrowers and Market Gardeners' Association, reports on the 4th December that at a recent meeting of the Executive, Mr. Geo. Quinn, Horticultural Instructor, delivered an appreciated address on lime sulphur spraying.

A resolution was passed authorising the Fruit Pool Board to arrange for the handling of any surplus fruits, which would tend to bring fruit lower than the minimum price fixed by the Association.

Arrangements were made for the Marion branch to visit Campbelltown on the 7th December. These inter-association meetings are of great value, as nothing cements different branches together more than these exchange visits.

In response to a request to the Tariff Board to consider the high duty imposed on imported glass for glass-house purposes, a reply was received that the matter would be looked into.

TO MAKE LIME WATER.

Limewater is very useful on the Orchard and Farm for Young Stock, Such as Foals, Calves and Pigs.

To make limewater add half a bag of slaked lime to a cask of rainwater, then stir well with a clean stick; when allowed to settle it forms a clear, colourless and odourless liquid, with a peculiar, alkaline, earthy taste. As water only dissolves $\frac{1}{2}$ grain to the fluid ounce or 10 grains to the pint, and limewater is a saturated solution of lime, there need not be any fear regarding its strength; so it can be given without fear to young stock, Apart from being a mineral constituent in food, this acts as a corrective and antacid, and renders curd in milk not so dense and more digestible.

When the limewater cask is empty, it may be filled up again with water; the lime gradually dissolves, which may be detected by the mixture losing its peculiar flavour, when more lime should be added.

Latham Dehydrators

"STAND ALONE"

The "Rolls Royce" of the Artificial Drying World.

Some Installations for Foodstuffs.

Purchaser	Principal Prods.
Merbein Dehydration Trust, Mildura	Sultanas Raisins etc.
Tasmanian Dehydration Pty. Ltd. Bridgewater two plants.	Apricots Prunes Apples
Charles Martin, Yackandandah	Prunes
Swallow & Ariell Ltd. Port Melbourne.	Carrots Turnips Cabbages, etc.
Woorinen Co-op. Pack. Shed, Woorinen	Sultanas Raisins etc.
Aurora Pack Co. Pty. Ltd., Irymple.	Sultanas Raisins etc.

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who will give all information.

FINANCIAL FACILITIES OFFERED.

The Firm of Messrs. John Heine & Son Limited

Allen Street, Leichhardt, Sydney, N.S.W.

The Largest Manufacturers in Australasia of
Fruit Canning Machinery and Automatic Can-making Machinery

Forty Years Progress in Modern Engineering.

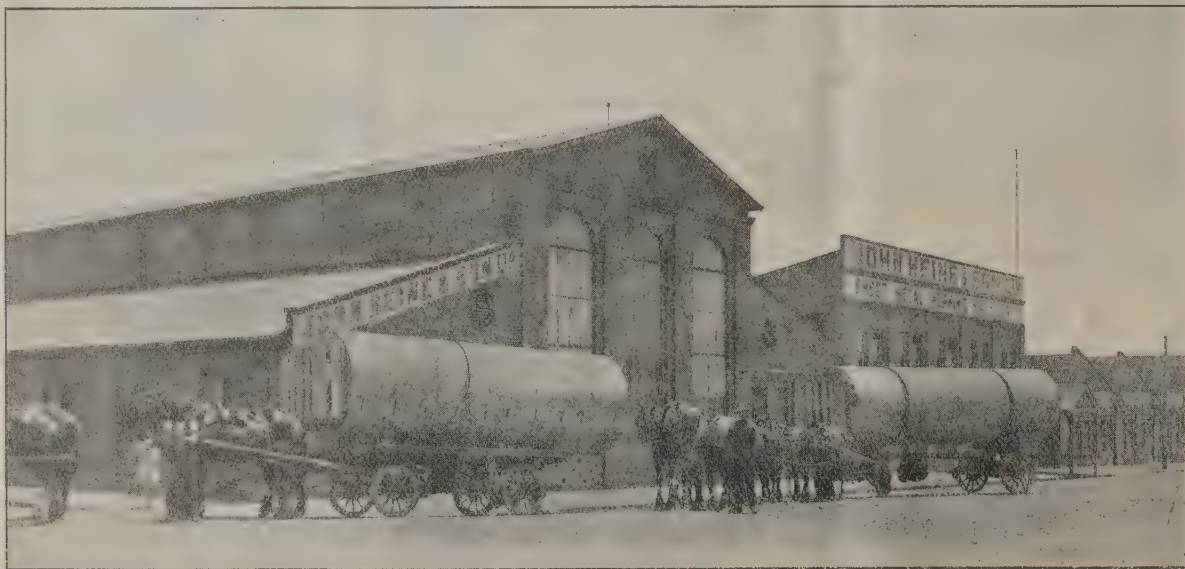
AMONGST the firms in Australasia devoted to the production of fruit canning machinery and automatic can-making machinery, Messrs. John Heine and Son Limited, of Allen-street, Leichhardt, Sydney, N.S.W., deservedly take high rank.

The various kinds of machines turned out from this firm—the principal manufacturers in Australasia of tin-making machinery and appliances used by the meat, fruit, jam and milk preserving industries—sufficiently de-

these large and modern works by the Sydney manager of this journal, and Mr. John Heine, junior, who manages the business, spent some time in taking him through the many departments, explaining as he went along the various kinds of machinery plant installed, all up-to-date, efficient, and labor-saving. The substantial buildings are of brick, with high saw-tooth roofs, and a large area of glass give splendid light and excellent working conditions for the staff of workers.

making condensed milk, fruit and jam tins. One of the latest factories equipped with a complete automatic can-making line is the Shepparton Fruit Preserving Company, Shepparton, Victoria.

Messrs. John Heine and Son Limited have made remarkable progress in the manufacture of canning machinery and appliances for canning Apricots, Peaches, etc. In this regard the works are of national value, and it is indeed fortunate for the canning in-



TWO CONTINUOUS AUTOMATIC COOKERS

Leaving the Works of John Heine and Son Ltd., for the Kyabram Preserving Company and the Ardmora Fruit Products Ltd., Mooroopna, Victoria.

monstrate the march of progress since the founder, Mr. John Heine (who is a native of Devonshire, England) commenced the business forty years ago.

Ever since Mr. Heine laid down and established his engineering works at Leichhardt, trade has developed by leaps and bounds, and to-day the land and buildings cover an

area of seven acres, being bounded by Allen, Francis and William streets, Leichhardt.

Recently a special visit was paid to

Great ingenuity has been shown in the design and manufacture of the intricate machinery and apparatus used by fruit canneries. The firm supplies complete plant for making fruit cans in the most labor-saving manner. These can-making plants are at work throughout various parts of Australia.

In Queensland hundreds of thousands of Pineapple cans are made yearly by the John Heine tin-making machines. In New South Wales and Victoria similar plants are at work

dustry that such a progressive firm is able to supply canneries with machinery that is not only labor-saving, but also embodies features which make for more perfect packing.

These high-grade automatic canning appliances are now at work throughout numerous factories in Australia, such as H. Jones and Co., Rosella Preserving Co., Hargraves and Sons Limited, Victoria Cross Manufacturing Co., South Australian Fruitgrowers' Co-operative Society, H. M. Leggo and Co., and many others.

The firm has just completed the installation of a new plant for the Ardmuna Fruit Products Ltd., at their Mooroopna (Vic.) Cannery. This plant consists of Peach slicers, syrupers, exhausters, closing machine, and a large continuous cooker and cooler. The plant is one of the most up-to-date lines at work in Australia, embodying every feature which makes for labour saving and high grade packing.

The illustrations reproduced show in front of the firm's extensive works two huge continuous automatic cookers, which are being hauled away for shipment to the Mooroopna Cannery, and also to the Kyabram Co-operative Fruit Preserving Company, Victoria.

The other illustration is that of the

Another special feature is the "John Heine" patented device, which tenderly takes care of each can at the inlet, outlet, and elevators, thus avoiding that objectionable feature—badly dented cans.

Our representative, after having had the two machines explained to him by Mr. John Heine, junior, was then taken through the many and important departments of these works.

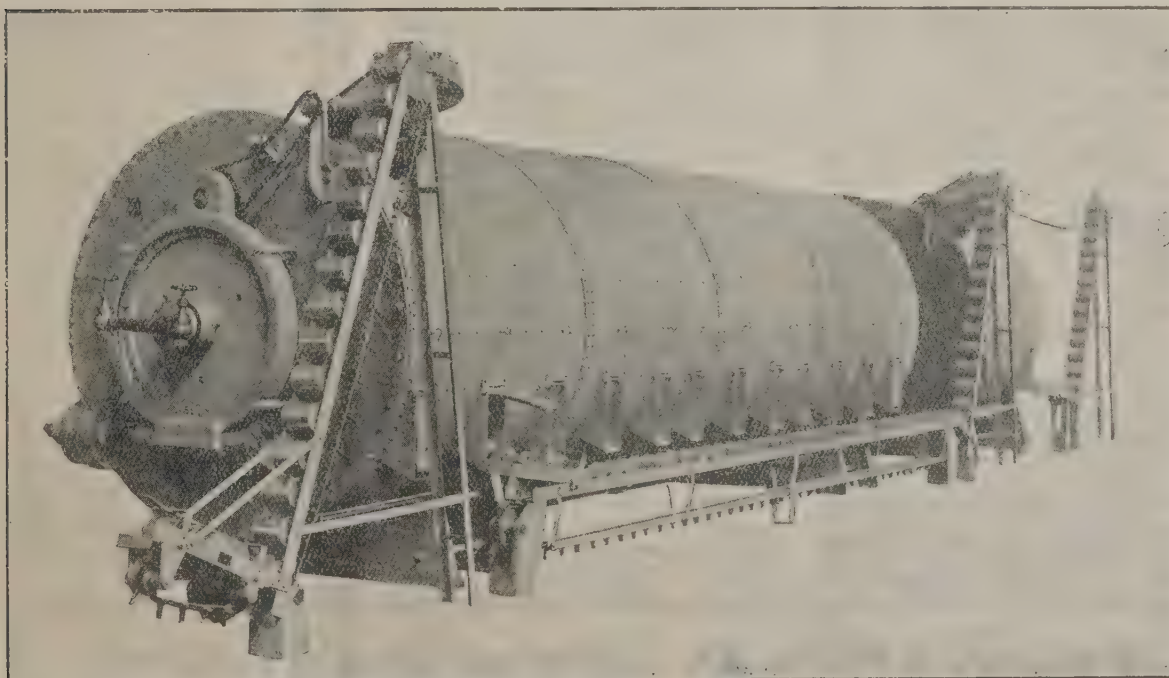
Upon entering the building there are a number of offices where all the business connected with this hive of industry is conducted, with a big staff of clerks, stenographers, and book-keepers. Upstairs are the designing and drawing office staff, in which section there is perfect light, because of the large number of windows. Then there is the pattern-making depart-

stores department was inspected, where all stores are kept for distribution to the various operators.

Then a number of machines were inspected, such as a machine for closing fruit cans, from high speed automatic down to the smallest hand closer. The next machine seen working was one for turning, planing, milling, wheel-cutting, etc. Also machinery for stamping out tops of tins. There was also a large Peach washing machine for washing Peaches.

The fact that the plant and buildings are set down at £80,000 in value, will indicate the large engineering business which is carried on by Messrs. John Heine and Son Ltd.

The firm has spared no expense in catering for the wants of the staff of 300 hands. Adjoining the works



CONTINUOUS AUTOMATIC COOKER.

Used for Processing the Fruits of Peaches, &c.

Manufactured by John Heine and Son Ltd.

John Heine Continuous Agitating Cooker, as supplied to the Kyabram and Mooroopna Canneries. In passing through this apparatus, the cans of fruit are automatically cooked. The time of cooking is pre-determined, and the cans are discharged from one of the intercepting outlets, and are then carried along to the cooler shown at the end of the picture, where the temperature of the can is rapidly reduced. Steam heat is carried direct to each can, which makes cooking quicker and uses little steam, and the substantial boiler plate construction of this cooker promises years of service.

ment. Crossing over from the offices in a narrow laneway with a huge weigh-bridge laid down for weighing all materials used in the manufacture of the firm's machinery.

Australian pig-iron and steel, which, upon entering the yard, is weighed, and then conveyed on an endless trolley, up to the smoking furnace, where the first process commences, after which the iron is then cast into various parts of machinery.

There is a large machine shop where all the castings and parts are turned and planed ready to be assembled and set up for each machine.

Passing further on, the supply

are luncheon and washing rooms for the workmen.

An interesting section visited was the packing department, where a number of Peach-slicing machines were seen, the Peaches being fed in by halves.

Much more could be mentioned about this enterprising firm, which is in close proximity to boat, tram, and rail, but sufficient has been said to demonstrate the size and importance of the business, and its value to Australia in providing thoroughly up-to-date service to some of Australia's most important secondary industries.

Tasmania.

Crop Reports : Cultural News : Items of Interest.

By Our Correspondent.

Agricultural Bureaux.—During this year a commencement will be made toward the inauguration of Agricultural Bureaux in the different producing centres of the State.

An organiser is to be appointed who will visit the different districts and assist in the formation of the bureaux. It is hoped by this means to stimulate interest in agricultural and horticultural development, the services of the Department of Agriculture being available in arranging more field tests, demonstration plots, and generally bringing to the notice of producers the essentials for more successful culture of the different crops produced.

Overseas Fruit Shipments.—Owing to the favorable crop prospects, it is probable that the record fruit shipment of 1923 will be exceeded.

According to list supplied by the different agents, the recent shipping strike has not interfered, to any extent, in the number of vessels available. Some 35 vessels are due to visit Hobart during the season, amongst which are the latest units of the P. and O. and White Star lines.

Advices received from the northern districts indicate that a good yield is evident in the principal commercial varieties, and that efforts will be made to arrange for the freights for three or four vessels to visit Beauty Point and ship direct.

Argentine Embargo.—Although Tasmania is not at present shipping fruit

direct to the Argentine, it is hoped that with the amendment to the Navigation Act, suitable vessels may be induced to visit Hobart as in pre-war years, and that these markets may be restored to us.

The recent embargo which has been promulgated on all Australian fruits by the Argentine Government to prevent the danger of introducing the fruit fly, has been applied without consideration of the occurrence of the pests in the several States. Fortunately, Tasmania is free of this scourge, and a strong protest is being forwarded at the unjustified treatment that has been meted in this respect in making the embargo of a Commonwealth nature.

Apple and Pear Standards.—The State Standardisation Board will meet in January to consider the standards governing the export of fruit to interstate markets.

In order to carry out the agreements reached at the recent Conference of Ministers of Agriculture and the Australian Fruit Council toward uniform State and Federal regulations, the Tasmanian Board is patiently awaiting the action of the Customs Department in respect to the amendments recommended by the Council at its last meeting.

From reports that have been received the regulations will not be promulgated until the desired amendments have been referred to the High Commissioner in London.

It seems rather extraordinary to Tasmanian growers that after bringing an Australian Fruit Council into existence expressly for the purpose of advising the Minister of Customs upon such matters, that such recommendations should be open to further review.

Besides delaying the issue of instructional matter to the fruitgrowers until the commencement of the export season and consequent inconveniences in branding, etc., it reflects rather upon the status and ability of representatives of the industry to advise on such matters.

Export of Canned Fruits to New Zealand.—At the recent meeting of the Australian Fruit Council a resolution was passed requesting that efforts be made by the Federal Government to obtain a reduction of the N.Z. Tariff upon Australian canned fruits. An intimation has now appeared in the press that such is not possible. Moreover, it is pointed out that the Australian Tariff is much higher upon the N.Z. article.

This is an unsatisfactory position. An appeal is at present being made throughout Australia to increase the consumption of canned fruits in order to save the large numbers of returned soldiers and other settlers who have embarked in the production of these fruits for their living. New Zealand processes only a very small quantity of her own fruits into the canned product, and imports large quantities of the American article, which Australian manufacturers could well supply.

It is a pity some reciprocal arrangement could not be made to make this market available to us, especially considering the propaganda that is being carried on at present to increase trade within the Empire of Empire food products.

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who will supply all information.

TASMANIAN FRUIT CROPS.

Crop Anticipations: Apples, 3,000,000 Bushels; Pears, 125,000.

The Tasmanian Government Fruit Expert (Mr. P. H. Thomas) reports regarding Apple crops as follow:— (Heavy)—Cleop., Alfriston, Tasma, King Pippin, Adam's Pearmain. (Good)—C.O.P., Delicious, Duke of Clarence, Stone Pippin, Sturmer.

(Medium) — French Crab, Jon. (Light)—Ribston, Scarlet, Dunn's, London.

Crop anticipations are:— Apples (75 per cent. crop), 3,000,000 bushels.

Pears (50 per cent. crop), 125,000 bushels.

Apricots, 150,000 bushels.

Plums are variable, generally light. Small fruits and berries, prospects good.

MARKETING AUSTRALASIAN FRUIT.

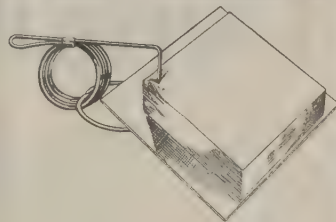
Messrs. Bradnum's Organisation.

Fruitgrowers will perhaps be interested to hear that Messrs. Bradnum, the well-known firm of fruit salesmen in Great Britain, have now arranged for more complete representation in Australia.

Bradnum's, like most other large firms in Great Britain, had small beginnings. The founder of the firm was William Bradnum, freeholder and market gardener, of Geldeston, Norfolk, who used to market other growers' fruit as well as his own, and in 1819 launched out into business for himself. This business has grown, until now, with the fourth generation of Bradnums, it has its houses in London, Liverpool, Hull, Cardiff, and

Southampton, with a selling agency in Glasgow, and selling agencies in Antwerp, Amsterdam, Stockholm, Oslo, Hamburg, and several of the other large cities throughout north-western Europe. They have an enormous turnover, and handle fruit on behalf of thousands of growers in different countries of the world, though hitherto their Australian business has not been large. They certainly handle fairly large consignments from Tasmania, but from the mainland States they have not had a great deal of business, and they have now appointed Mr. G. P. Embelton, of 506 Little Collins-street, Melbourne, to handle their business in Victoria, South Australia and N.S.W., and to bring their name more directly under the notice of the growers.

The "CROFT" Paper Holder



(PATENT APPLIED FOR)
FILLS A LONG-FELT WANT

Securely holds Wrapping Paper, and is self adjusting, as the sheets are removed.

This was recently invented by Mr. Arthur Croft, Engineer of the Harcourt Cool Stores. That it is a valuable aid to the fruit packer is proved by the large number of growers in the district who are now using it.

Price, 5/6. Postage 4d.
Agents Wanted in All States

F. R. MELLOR
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Apple Exports to all Parts of the World

by

J. G. MUMFORD

(Established 20 years.)

Can handle your fruit to the best advantage, for the following reasons:—

1. Direct representation in all leading overseas ports, both in the U.K. and the Continent.
2. Growers have the choice of markets.
3. All overseas representatives are pioneers in the overseas fruit trade.
4. Every consignment of fruit is sold on its merits, and returns made promptly.
5. All fruit sold by auction and catalog of selling prices posted direct by auctioneer to grower day after sale.

GET MORE FOR YOUR FRUIT

by shipping to any of the following overseas firms through

J. G. MUMFORD

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M. Isaacs & Sons Ltd. McGeorge & Jardine,
(Established 1815.) (Established 1877.)

GLASGOW.

Russell, Turnbull & Co.
(Established 1872.)
Also at Bristol and Southampton.

LIVERPOOL.

BELFAST & DUBLIN.

Connolly, Shaw & Co. Ltd.

HULL & NEWCASTLE.

B. & J. Shaw.
(Established 1863.)

AMSTERDAM, ROTTERDAM, HAMBURG.
Algemeene Vruchten Import Maatschappij.

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Wider Distribution means Better Prices and Greater Production.

Consign Your Fruit For Sale in Local Markets to

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Branches at—

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MARKETS.**

We supply all classes of
ORCHARD REQUISITES,
including

Apple Wrapping Paper, White Case Lining Paper, Woodwool, Corrugated Straw-board for tops and bottom of cases, Nails, Paper, Stencils, New Cases (in shocks or made up), Second-hand Cases.

Agents for

**LIGHTNING FRUIT GRADER,
HAVE-U MOTOR SPRAY PUMPS AND
ENGINES.**

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MELBOURNE

who will give all information.

# Victoria.

## News and Notes.

### VICTORIAN FRUITGROWERS' CENTRAL ASSOCIATION.

A meeting of the Victorian Fruit-growers' Central Association was held at Melbourne on December 17th, Mr. Geo. Mock presiding.

In view of the excellent record of the Central Association in service to growers, it was decided to form a committee to draw up a constitution and basis of affiliation for presentation to the next Conference (which is to be held at Portland), so that growers can be effectively represented, and the work consolidated.

### ARBITRATION COURT.

#### Engine Drivers' Award.

A claim was recently served by Federated Engine Drivers' and Firemen's Association of Australia against several fruitgrowers' cool stores.

The case was before the Arbitration Court on 16th December. The Union, however, agreed to strike out the cool stores, as they found on inquiry that the conditions under which the engine drivers worked were, on the whole, fair and reasonable.

The general award of the engine drivers expires in May, 1926, when a new award will be sought from the Arbitration Court. The representatives of the Fruitgrowers' Cool Stores' Association agreed to meet representatives of the engine drivers in conference prior to that date; when it is hoped to arrive at an agreement acceptable to both bodies.

### DISTRICT NOTES.

#### Bunyip.

Mr. F. Thomas, Bunyip, reports under date, Dec. 10th:—The principal fruits in this district are Apples, Pears and Plums. The favourite Apples are Jonathans, Delicious, Yates, Rome Beauty, King David, Sturmer, Statesman, Rokewood, Stewart's, Gravenstein. Pears—Williams, Packham's, Vicars and Josephines.

The crops generally are light to medium, considerably lighter than last year, but so far clean and practically free from spot or codlin moth. Rome Beauty and Five Crowns failed, but Yates are fairly good.

A cool store is being erected close to the Bunyip station, and growers are looking forward to more prosperous seasons in the future.

#### Gorae.

Mr. E. Hedditch, of Gorae, reports (26/11/25) that their main fruits are Apples. The Jonathan crop will be medium, while Rome Beauties, Five Crowns, and others will be light. On the whole, the crop is very much lighter than last year, but the fruit is clean.

The acreage bearing, and coming into bearing, is about 300 acres. Last season about 50,000 cases of Apples were harvested.

dium to light; Jon. very fair, Five Crown and Romes light); Pears, medium; Peaches, good; Cherries, good; Plums, medium; Passion-fruit, suffering from too much rain last season; Gooseberries, good; Strawberries, medium.

### FRESH FRUIT DISTRIBUTION.

#### Activities in Victoria.

IN accordance with its promise, the Victorian Government is making an advance of £2,000 to the Fruit Marketing Committee and the State Advisory Board to assist in the disposal of this season's fresh fruit.

The advance must be repaid by a levy on growers.

The Manager, Mr. B. S. B. Cook, accompanied by the Chairman, Mr. J. M. Ward (Superintendent of Horticulture), visited Merrigum, Shepparton and Ardmara recently, explaining the scheme to growers.



The "Better Farming Train," conducted by the Victorian Railways and the Dept. of Agriculture is a splendid success. Scene at Euroa, where large crowds attended.

The orchards in this district, as far as appearance of trees goes, look beautiful; the light rainfall in the winter, which they very seldom have, has given the trees a great contrast to last year, when there was so much black spot about.

The new cool store has been a great boon to the growers here; the Apples have turned out well, about 1 per cent. loss, which speaks well for the keeping quality of Portland fruit.

#### Wandin.

Mr. W. T. Sebire, Wandin North, writes (14/12/25):—The principal fruits grown in this district are berries of all descriptions. Crops medium.

Crop prospects are—Apples, me-

Growers generally appreciate the action of the Government in endeavouring to assist the industry.

It is understood that the northern growers favor the deduction of 3d. per case on all fruit handled by the Committee—1d. of which is to assist the local organisations, and 2d. towards repayment of the advance.

Mr. Ward explained that he was made Chairman of the Committee by request of the growers, but that officially the Government took no responsibility for the scheme. The reason of the appointment of a manager without advertising was the imminence of the fruit season, it being necessary to secure a manager to avoid the delay, which would necessarily be incurred by advertising.



## Australasian Apples in Hamburg.

(Continued from page 547, December issue.)

The variety that is in demand in the very first place is the Cleopatra. These always make higher prices than on the English markets. It will certainly pay to ship this variety to our market.

Jonathans are also well liked, but they should be clear skinned and sound, and show colour. In the beginning of the season, they still have to compete with American Jonathans, which are of beautiful quality (but not sound at that time of the year, being storage Apples, or at least not durable. Therefore, many Victorian Jons. ex "Oтира" made low prices, being of inferior quality, immature and blemished. The best made 22/-, 23/-. Those ex "Abbekerk" were mostly too ripe, but still made good prices on the whole, as there were not many, and, of course, there were no more American Jons. on the market then.

Munroes (or Dunn's) are well known, and in good demand if they are coloured. Arriving in this condition they are sure to realise high prices. Rome Beauties are very well known, though not so well liked as the varieties mentioned. But they are well paid all the same if they are of good colour, and arrive in sound condition.

Rokewoods also made good prices generally, and we made some excellent prices for Statesman, Sturmers, and Stone Pippins ex "Abbekerk," but again only for sound fruit of first quality.

As we said, this is no market for cooking Apples, and it is further not advisable to ship varieties that are not known here, so please avoid shipping varieties like: — Reinnettes, Hoover, Stewart, Northern Spy, Winter G, Melon S, Lord Wolseley, Es. Spitz.

Even varieties like C.O.P. and London Pippins were not well paid, unless coloured. This may be better next season, as they can no more be said

to belong to the unknown varieties. Kings and Pearmains must be quite red, or almost red, to obtain good prices.

So the summary is that our market demands first-class dessert Apples without blemish. If the fruit is beautifully coloured also unknown varieties can be well sold. Of the well known varieties we can also do with second quality. Cleos. will always do well, also when they arrive in green condition. Of course, everything must be sound, as most of the Apples arriving at Hamburg are re-exported.

The sizes preferred are for the very first class stuff the 2½in. and 3in., for the others 2½in. and 2½in. In the "Oтира" the 2½in. obtained, on the whole, higher prices. In the "Abbekerk" 2½in. was preferred, but the difference was not so great.

Defects.—The worst is (a) Bitter Pit. Munroe's (Dunn's), especially the big sizes, are affected.

(b) Black Spot. Especially Jonathans of all sizes are affected.

(c) Bruises.—Especially the well coloured (ripe) Apples are affected. Corrugated card board, as was used by some growers, seems to be more effective against this than wood-wool.

(d) Spray Spots.—Many Apples were dirty from spray. This spoils the appearance.

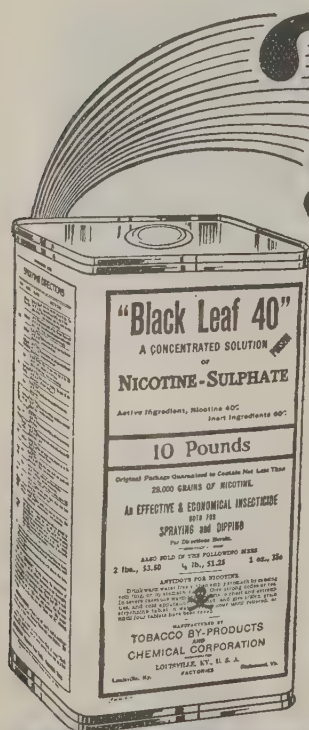
Packing.—Only few cases were wired. This is to be recommended to avoid damaging of the cases (and, consequently theft of the contents).

Marking.—Superfluous marking is to be avoided. Indication of name of shippers, variety, size, eventually brand and shipping number (our shipping number is "566," on either the strongest of the case boards) is quite sufficient. Indication of grade is only of interest if the grading is uniform, and gives a guarantee for a certain quality of the contents.

Lots.—It is not advisable to send too small lots. Hamburg is principally an export market, and prefers lots of some importance.

The White Service.—We acknowledge having received from the White Service Ltd., White House, Monument, London E.C.3., an illustrated review of the last Australian fruit export season.

This review is compiled in an interesting form and contains statistics setting out the export totals from Australia and New Zealand, ports of destination, and list of ships, giving the total quantities carried by each. Further, graphs are included showing the market fluctuations during the months of April, May and June, 1925. This is a very interesting work of reference, useful to all connected with the fruit trade.



# Why be satisfied with dwarfs and culls

Protect your fruit and rid your orchard and garden of Aphis and similar destructive insects at a cost of only a few cents a tree. "Black Leaf 40," the "Old Reliable" nicotine spray, is recommended by Agricultural Colleges and Experiment Stations. Spray singly or in combination with solutions for scale, codlin moth and other orchard pests.

Sold by leading Australian and New Zealand Dealers

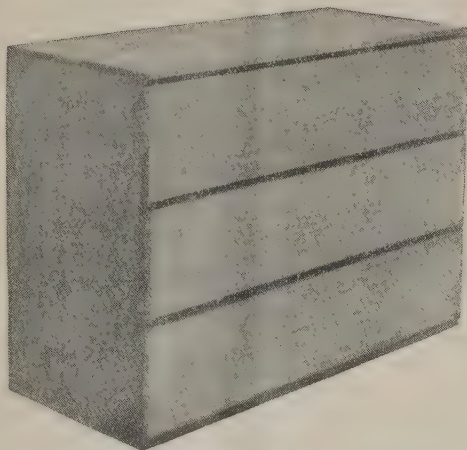
Tobacco By-Products and Chemical Corp.  
Incorporated

Louisville, Ky., U. S. A.

Kills  
Aphis

# "Black Leaf 40"

40% Nicotine



Australian Apple and Citrus Dump Bushel Case.

## SOME ADVANTAGES IN FAVOR OF IMPORTED CASES

- (1) Full drawback of duty allowed on all cases exported
- (2) 1/3rd less freight than on Hardwood cases
- (3) 25% rebate on rail freight for full trucks
- (4) All timber cut to exact sizes making it an easy matter to assemble a symmetrical case
- (5) Every piece of timber fit and ready for use, thereby eliminating waste
- (6) Can be supplied in shooks, or made up and branded

## SOFTWOOD CASES

(IMPORTED)

*Cheaper than hardwood if exported.*

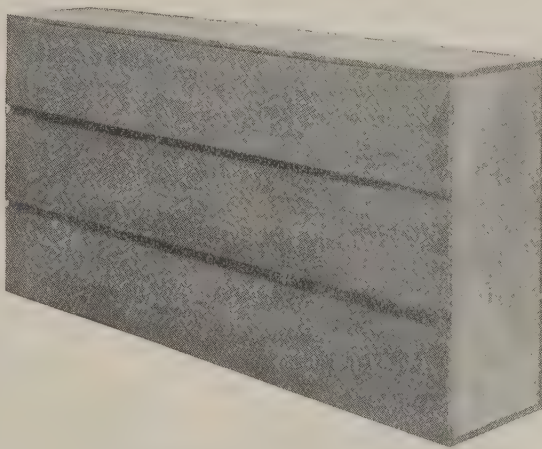
*Cut to Australian Standard Sizes*

DUMP BUSHEL with one piece top and three equal piece side

UPRIGHT BUSHEL with one piece top and three equal piece side

DRIED FRUIT CASE with one piece side and two equal pieces tops and bottoms

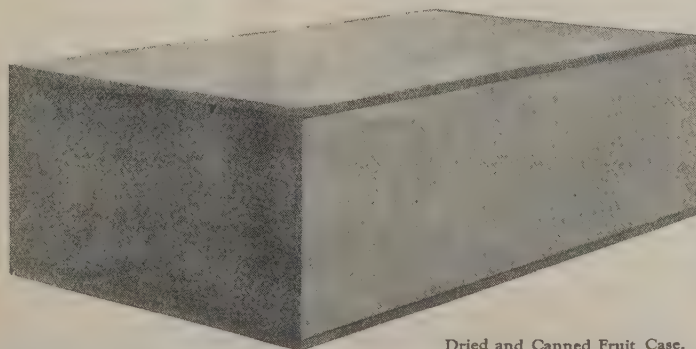
CANNED FRUIT with one piece side and two piece tops and bottoms



Upright Bushel Case with Centre Partition.

Particulars from the Largest Importers

## Overseas & Interstate Trading Co. Ltd.



Dried and Canned Fruit Case.

52 Market Street,  
Melbourne

---

Phone Central 9110

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Also  
King William Street,  
ADELAIDE



# The Fruit Trade

## Market Reports and News Items.

**REPRESENTATIVE FIRMS, FRUIT  
MERCHANTS, AGENTS, EXPORTERS,  
Advertising in this Journal.**

### NEW SOUTH WALES.

#### Sydney.

Chilton, F., City Fruit Markets.  
Greenberg, S. & M., Fruit Markets.  
Jenkins, John, Fruit Exchange.  
Louey Pang & Samuel Wong Ltd.,  
Thomas, St., Haymarket.  
Rule & Beavis, Fruit Exchange.

### VICTORIA.

#### Melbourne.

Coastal Farmers' Co-op. Society, Western Market.  
Colombie, H. G., 115 Hotham St., East Melbourne.  
Cave, F., & Co., Melbourne.  
Davis, J., Western Market.  
Dennys, Lascelles Ltd.  
I.F. & M. Co. Ltd.  
Lister, G., Western Market.  
Millis, A., & Sons, Western Markets.  
Mumford, J. G., 449 Flinders Lane.  
Pang & Co. Ltd., H. L., Little Bourke Street.  
Silbert, Sharp & Davies, Western Markets.  
Stott & Son, T., Western Markets.  
Tim Young & Co., Western Market.  
Vear, F. W., 49 William Street.  
Wade & Co., H. M., 471 Flinders Lane.  
Woolf, G., Western Market.

### QUEENSLAND.

#### Brisbane.

Barr, A. S., Fruit Exchange.  
Collard & Mackay, Fruit Exchange.  
Cooksley & Co., Fruit Exchange.  
Finlayson & Son, Fruit Exchange.  
Geeves, H. V., Fruit Exchange.  
Robsons Ltd., Fruit Exchange.  
W. J. Whitten & Co., Fruit Exchange.

### TASMANIA.

#### Hobart.

Jones & Co. Ltd., H., Fruit Exporters.  
Port Huon Fruitgrowers' Assoc.  
Peacock & Co., W. D., Fruit Exporters,  
and at London.

#### Launceston.

Bender & Co. Pty. Ltd., 110 Elizabeth Street.

### WEST AUSTRALIA.

#### Fremantle.

Simper, H. J. & F. Ltd.

### SOUTH AUSTRALIA.

#### Adelaide.

Silbert, Sharp & Bishop Ltd.

### NEW ZEALAND.

#### Auckland.

Radley & Co. Ltd., Fruit Auctioneers.  
Turner & Growers Ltd., City Markets.  
Dunedin.  
Co-operative Fruitgrowers' of Otago Ltd.  
Paterson, Thos., & Co., Vogel Street.  
Reilly's Central Produce Mart.

### ENGLAND.

#### London.

Bradnum, Jas.  
Dennis & Cooper Ltd.  
M. Isaacs & Sons Ltd.  
Jacobs, E., & Sons, Covent Garden  
Joel, R., & Sons, 16, 17, 20 Russell St.,  
Covent Garden.  
Margetson & Co. Ltd., Covent Garden.  
Monro, Geo., Ltd., Covent Garden.  
Poupart, T. J., Ltd., Covent Garden.  
Ridley, Houlding & Co., Covent Garden.  
Swann & Co., 3 Salter's Hall Court.

#### Bull.

White & Son Ltd.

B. & J. Shaw.

#### Bristol.

Bristol Fruit Brokers Ltd.

#### Liverpool.

Adam, James, Son & Co., 1 Temple Court.

MacGeorge & Jardine.

#### Doventry.

Boswell Bros. & Davis,

#### Manchester.

North of England Fruit Brokers Ltd.  
—Australian Agent, N. V. Wade, 8  
Bridge St., Sydney, N.S.W.

#### Southampton.

Bristol Fruit Brokers Ltd.

#### Newcastle.

B. & J. Shaw.

### WALES.

#### Cardiff.

Connolly, Shaw & Co.

### SCOTLAND.

#### Glasgow.

Russell, Turnbull & Co.

### IRELAND.

#### Dublin & Belfast.

Connolly, Shaw & Co.

#### Amsterdam & Rotterdam.

Algemeene Vruchten Import Maat-  
schappy.

### DENMARK.

#### Copenhagen.

Kobenhavns Fugtauktioner.

### GERMANY.

#### Bremen.

Fruchthandel, Gesellschaft.

#### Cologne.

Algemeene Vruchten Import Maat-  
schappy.

#### Hamburg.

A.heimer, P. H., & Son., Fruchthof.  
Algemeene Vruchten Import Maat-  
schappy.

Lutten, J. H., & Co., Hamburg.

Stier, Aug., Fruchthof, Reps. J. B. Mills  
& Co., 9 Queen St., Melbourne.

## Australasian and Foreign Market Reports.

### Great Britain.

### The Coming Export Season.

"Should be Favourable," states  
London Broker.

In a letter to Australasian Fruit Growers, Messrs. M. Isaacs and Sons Ltd., Auction Rooms, Monument Buildings, London, give a hopeful forecast for the coming Apple export season. The firm recommend great care in grading and packing, the avoidance of slack packing and of too much wood wool, the elimination of all unnecessary branding; small parcels of under 20 cases should be avoided.

Messrs. Isaacs state it is too early to forecast the future, but they think the season should be favorable. The American and English crops, however, are larger than last season. Concentration of sales in auction rooms is advocated in preference to selling by private treaty.

London (20/11/25).

Messrs. T. J. Poupart, Covent Garden, report under date 20/11/25, as follows:—

The trade during the last few days

has been good. Imported Apples have advanced slightly. South African Oranges are abundant at reasonable quotations, but there is a tendency to lower prices with the heavy shipments from Spain which are due within the next few days. The total number of packages is 317,211, of which 82,131 boxes is consigned to London. Apples range from 2/- to 10/-; C.O.P. 10/- to 15/- half case, second grade 3/- to 7/-.

### NEW SOUTH WALES.

#### Sydney (22/12/25).

Mr. F. Chilton, City Fruit Markets, reports under date, 22/12/25:—

Queensland Fruits:—Bananas, 12/- to 26/- per case. Pines, smoothleaf, 16/- to 22/-. Passions, 4/- to 7/- per half case. New South Wales Fruits:—Bananas, 12/- to 26/- per case. Lemons, 2/6 to 10/- per bushel case. Oranges, Valencia, 6/- to 11/-; Common, 2/- to 8/-. Apples: (Cooking), Allsop, 6/- to 14/-; Mobbs Royal, etc., 10/- to 18/-. Passions, 6/- to 14/- per half case. Tomatoes, 5/- to 11/-. Apricots, 3/- to 7/-. Plums, red, 4/- to 12/-; Shiro, 2/- to 6/-. Peaches, 2/- to 14/-. Nectarines, 6/- to 12/-. Gooseberries, 3/- to 5/- per quarter case. Cherries, 3/- to 7/-. Victorian Fruits:—Apples, Yates, 12/- to 25/- per bushel case. Lemons, 7/- to 12/-. Apricots, 8/- to 12/-. Tasmanian Fruits:—Gooseberries, 5/- to 8/- per half case.

### VICTORIA.

#### Melbourne (31/12/25).

The following were the prices ruling at the Western Market:—Apples—Good to choice eating, 7/-, 15/-. Apricots—Good to choice dessert, 6/6, 8/-; medium dessert, 5/-, 6/-. Bananas—Queensland, 20/-, 33/- double. Gooseberries, 6/-, 9/-. Lemons—Victorian, 5/6, 7/6. Oranges—Murray districts, 12/-, 18/-; Goulburn Valley and other Victorian, 7/-, 11/-. Peaches—Good to choice dessert, 6/-, 10/-; medium dessert, 4/-, 6/-. Pineapples—Queensland, 20/-, 23/- double. Tomatoes, 5/-, 9/-. Cucumbers, 7/-, 10/-.

### Citrus Report.

The V.C.C.A. Market Representative reports for the week ending 24th December, 1925:—

There was a fair demand this week for good quality Oranges, the best selling up to 18/-, but sales generally ranged from 14/- to 17/-. For plain Oranges 10/- to 12/- were the ruling prices.

The demand remained steady for Lemons at from 5/- to 8/-.

### QUEENSLAND.

#### Brisbane (18/12/25).

Lemons, 3/- to 5/- per bushel case. Pawpaw, 2/- to 5/-. Pines, rough, 2/6 to 6/6 a doz., 12/- to 14/- case;

Smooth leaf, 2/9 to 6/- doz., 12/- to 14/- per bushel case. Mangoes, 9/- to 11/-. Passion Fruit—Prime 4/- to 6/- half bushel case, others 2/6 to 3/6. Peaches, 2/6 to 5/-. Plums, 2/6 to 5/-. Nectarines, 5/- to 8/- half bushel case. Grapes, black, 1/- to 1/3 lb.; white, 6d. Limes, 7/- to 8/- half bushel case.

#### TASMANIA.

Hobart (12/12/25).

Apples, C.P.M., fair, 11/-; Democrats, 13/- to 14/-; S.T.P., 9/6 to 10/-. Cherries, Florence, 15/- to 21/-; Big-gareau, 7/6 to 9/9; May Duke, 7/- to 8/6; blacks, 9/- to 12/-; cooking, 6/- to 8/3 half case. Strawberries, to 10/- per doz. pound. Gooseberries, to 3/9 half case. Oranges, 12/- to 14/-. Lemons, 10/- per case.

#### SOUTH AUSTRALIA.

Adelaide (17/12/25).

Apples, eating, 16/- per case; cooking, 14/-. Apricots, 13/-. Cherries, dark, 13/- to 15/-; light, 11/-. Currants, red, 6/- to 7/- doz. lb. Gooseberries, 9/-. Lemons, 9/-. Oranges, Common, 12/-; navels, 15/- to 16/-. Passion Fruit, 40/-. Pines, 18/- to 20/-. Plums, light, 8/-. Strawberries, 9/- doz. lb. Raspberries, 6/6 doz. lb.

#### WESTERN AUSTRALIA.

Perth (15/12/25).

Apples, Yates, prime dumps, 15/- to 21/9; others, 12/- to 14/-; Doherty's, dumps, 11/-. Citrus fruits: Navels, flats, 10/- to 14/3; Valencia's, prime dumps, 9/- to 14/-; and flats, 8/6 to 13/6; other dumps, 8/-; and flats, 6/6 to 8/-. Lemons, dumps, 3/6 to 8/6; flats, 4/- to 9/- (a few 13/6). Other Oranges, 6/- to 8/6. Apricots, prime dumps (a few), 11/- to 16/-; and flats, 9/- to 16/-; other flats, 3/- to 9/-. Peaches, prime, 8/- to 17/3; medium, 5/- to 7/-; others, 2/- to 4/6. Plums, flats, 3/- to 11/-; half bushels, 8/- to 11/-. Cherries, half flats, 10/- to 22/-; trays, 13/- to 20/3. Strawberries, best, 10/- to 15/9; others, 5/- to 9/-. Loganberries, 10/6. Figs, trays, 3/- to 7/3; flats, 5/- to 10/6. Cape Gooseberries, 3½d. to 4½d.

#### NEW ZEALAND.

Dunedin (18/12/25).

Reilly's Central Produce Mart, reports under date 18/12/25, as follows:—

Supplies of Apples and Oranges are in excessive requirements. Full supplies of Strawberries, Cherries, Tomatoes available.

Prices were as follows:—Apples: Desserts—Choice Canadians, 19/-; Delicious to 14/-; Sturmers to 14/-; Dougherty's to 16/-. Lemons, Italians, 25/- Oranges, Adelaide Valencia's, to 18/-; N.S.W. Valencia's, to 14/-. Bananas, ripe choice, to 36/-; green to 30/-. Pineapples to 22/6. Strawberries: Dessert, 1/2½, 1/10½; jam, 10½, 1/- per pottle. Grapes, 3/8. Christ-church Tomatoes: 1sts., to 1/4½; 2nds., to 1/-; locals, to 1/6½. Cherries: Choice, to 1/8½; small inferior, to 9d. Blackcurrants, to 6d. Cherry Plums,

to 5d. Pears: Nelis, 5d.; Coles, 5d.; Barrys, 4d. Green Gooseberries, to 3d. Walnuts, to 11d. per lb.

#### Croydon Horticultural Show.

The Croydon and district combined Show will be held on March 26-27th, 1926.

#### EAT MORE FRUIT.

#### Excellent Results from Advertising Campaign in England.

There is ample evidence that the campaign conducted in England has stimulated fruit consumption. This is in line with similar experiences in other parts of the world.

A press cable recently stated that fruit consumption had trebled as result of the advertising campaign.

Amongst other "stunts" a song "Eat more fruit" was composed and widely sung in England. [We have the music, but only one copy of it. However, here are the words.]

#### Eat More Fruit.

Everywhere it's advertised, "eat more fruit,"

I think that's a good idea, yes, eat more fruit!

In prehistoric days they used to live long lives,

Well, Solomon, as we all know, he had a thousand wives, So

#### Chorus.

Eat more fruit, eat more fruit,

Don't eat mutton, don't eat lamb, don't eat beef, don't eat ham, Then you'll find, then you'll find,

You'll live to ninety-nine before you scoot, scoot, scoot.

What did Eve say to Adam, the saucy little madam,

"Ah! Adam, you must eat more fruit."

Bertie took his Angeline out one night,

Took her out to dine, and what an appetite,

And when he'd got his bill, just five pounds six and three,

He said to her, "The next time dear that you come out with me—

Ch.—"Eat more fruit . . ."

Missis Green and Missis Brown, strange to say,

Went to church, and both got married one Sunday,

And in two years or so, Missis Brown had three,

"I've got none," said Missis Green, so then said Missis B.—

Ch.—"Eat more fruit . . ."

Mister Brown rolled home one night, he was oiled,

Wife was waiting and her temper simply boiled,

He flung his arms around her neck, and then did cry,

You are my angel darling, then his wife made this reply—

Ch.—"Eat more fruit . . ."

Britain's very fond of sport there's no doubt,

Ev'ry game we enter for we get knocked out,

We never seem to get a boxer with a biff,

We'd have a lot of champions in Britain really if:—We

Ch.—"Eat more fruit . . ."

#### NEW SOUTH WALES.

Mr. W. S. Arnold, manager, Soldier Settlement, Kurrajong, N.S.W., reports as follows

Spraying programme for the settlement is practically nil, as we cope now with various scales with fumigation.

The Dicky Rice pest will receive the very fullest attention this year to get at its life history in detail in both field and laboratory, as a knowledge of such history is half the battle in coping with it. We are trying many spray specifics, as well as tanglefoots, such as dick stick, fly paper, ostico, etc.

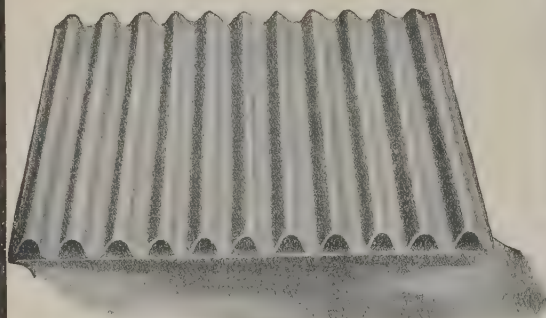
Tests in sub-tropical fruit culture are being made in Western Australia. Bananas, Mangoes, Custard Apples, and Pineapples are being tried.

A livestock sermon in six words: Better sires, better stock, better success.

THE PROPRIETOR OF AUSTRALIAN PATENT NO. 13696, dated 29th June, 1914, for "Can Cooking Machines," and AUSTRALIAN PATENT NO. 17978, dated 18th November, 1924, for "Improvements in Can Cooking Machines," will dispose of the whole or part interest in the Patents or grant licences on ROYALTY, and invites tenders in respect of same in order to fulfil the full requirements of the trade and the public.

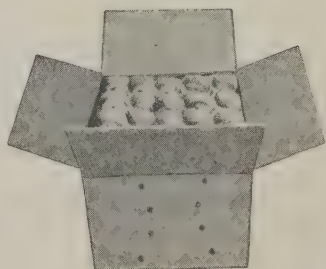
Address enquiries to PHILLIPS, ORMONDE, LE PLASTRIER & KELSON, Patent Attorneys and Consulting Engineers, 17 Queen Street, Melbourne, where drawings and specifications may be obtained.





# Corrugated Strawboard Liners for Fruit Cases

A Safe Insurance Against  
**BRUISED FRUIT**



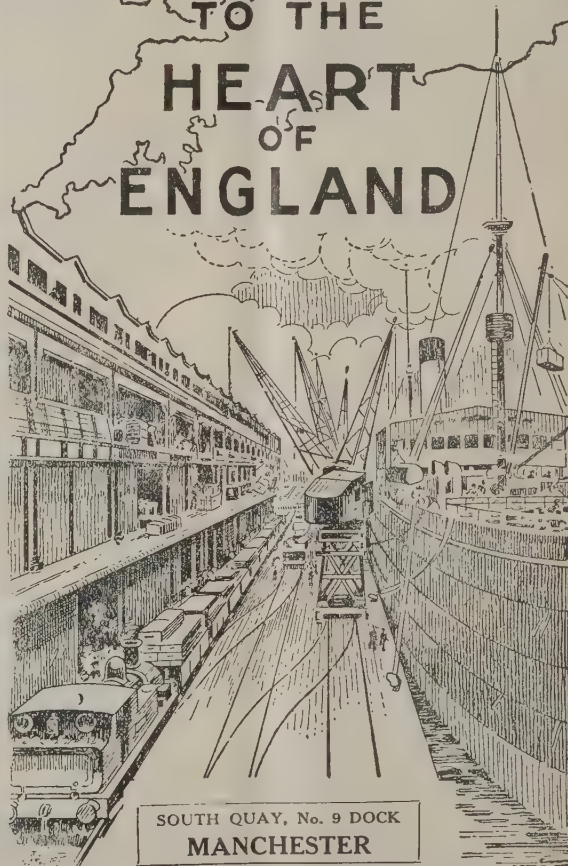
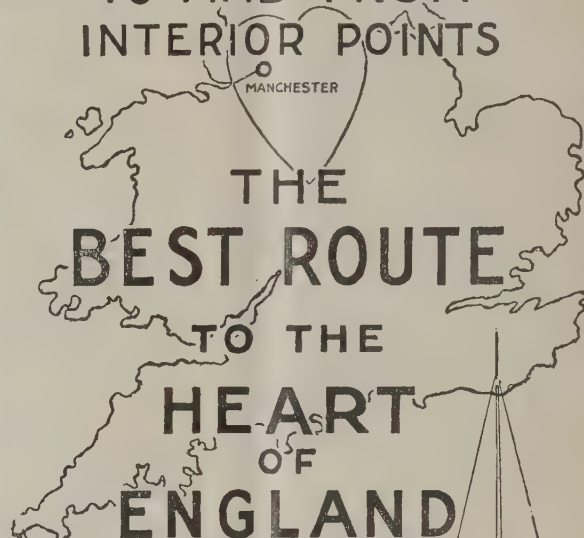
**CORRUGATED CASES**  
SUITABLE FOR FRUIT PACKING

*Full particulars on application to—*

**J. Fielding & Co. Ltd.**

Buckingham and Chalmers Sts.  
SYDNEY, N.S.W.

SHIP **VIA**  
**MANCHESTER**  
TO AND FROM  
INTERIOR POINTS



**SOUTH QUAY, No. 9 DOCK  
MANCHESTER**

**REDUCE TRANSPORT COSTS BY DIRECT SHIPMENT  
TO ONE OF THE WORLD'S GREATEST MARKETS**

*Representative in Australia and New Zealand:*

**Captain W. J. WADE, 8 BRIDGE STREET, SYDNEY.**

**CONTROL OF FRUIT PESTS.**

Continue to spray with arsenate of lead to check the codlin. Close watch should be kept for all possible sources of infestation and infection, such as returned cases. Such cases should be immersed in boiling water for not less than three minutes. This will effectively kill any grubs which may be sheltering between the joints.

Among the many pests which should engage the vigilance of the fruitgrower in N.S.W. is the fruit fly, states the N.S.W. Department of Agriculture.

Growers in those districts which are free from this pest should do all that is possible to keep them free, while in infested districts every endeavour should be made to keep the pest in check, and any fruit found to be infested should be promptly burnt.

It is necessary, in order to secure satisfactory results, that all growers should recognise their responsibilities, and by common effort—sustained, systematic, prompt and thorough—whatever action science, experience, and the necessities of the position requires should be taken. Only in this way can satisfactory results be achieved.

Fallen and infested fruit should be regularly picked up and burnt. It is disastrous to wait until the maggot has left the fruit. It should be des-

troyed in its most vulnerable stage—that is, when it is still in the fruit.

A strict watch should be kept for slugs; they are quite easy to control, but if not effectively attacked may do a considerable amount of damage. They may be observed on Cherry and on Pear trees, of which they destroy the leaves, or so damage them as to interfere seriously with their functioning. Spraying with lead arsenate will prove effective.

**FRUIT TREE SPRAYING.**

In another part of this issue there will be found an advertisement for "Sprayol"—an oil spray which is already well known to many orchardists. This is manufactured under expert supervision, and from a complete knowledge of the requirements of a spraying compound for the purpose for which it is manufactured. Messrs. John Fell and Co. Ltd., petroleum refiners and importers of Sydney, write us with regard to this spray.

"It is a recognised fact that insurance is the best policy against loss, damage or destruction; consequently the orchardist is always watchful for the best insurance policy to protect his trees against the too numerous pests and diseases. The main object of this firm is to help the orchardist combat and eliminate these same

pests and diseases, and it is with this in view that we now offer Sprayol. Over two years have passed since the inception of Sprayol in our laboratories, but before offering it to the public, we have subjected it to severe tests conducted in the laboratories and orchard, which have resulted satisfactorily.

"Sprayol emulsifies immediately, and retains the emulsion without stirring. It is wholly an Australian product, the mineral oil which it contains being refined in this country. Sprayol is entirely free from injurious acids and chemicals, that might be harmful to trees and foliage. Not only does this preparation perform its work efficiently, but it is most economical to use. The main features regarding economy are as follows:—(1) mixes freely with cold water, (2) remains in perfect emulsion without stirring, (3) atomises freely at spray nozzle.

"These features will undoubtedly save the grower many hours per year in lost time, thus reducing the cost of growing. Sprayol has been subjected to exhaustive trials by orchardists under the supervision of the Department of Agriculture, giving the highest results. Accordingly, Sprayol is not an experiment, it is a proven product."

**FRUITGROWERS!**

—IN SHIPPING YOUR FRUIT TO—

# The North of England Fruit Brokers Ltd. MANCHESTER

YOU ARE REACHING 10,000,000 CONSUMERS WHO ARE NEARER TO OUR SALEROOMS THAN TO ANY OTHER SOURCE OF SUPPLY.

BY USING OUR SERVICE, YOU ELIMINATE CHARGES, WHICH ARE INCURRED IF FRUIT IS SHIPPED TO THIS VAST POPULATION THROUGH ANY OTHER ROUTE.

**Consign via—THE MANCHESTER SHIP CANAL to  
Britain's Great INLAND PORT and MARKET**

For Shipping Space, Advances, Etc., Apply—

**Principal Australian Agent : NOEL V. WADE, 8 Bridge Street, Sydney, N.S.W.**

VICTORIA.—F. W. VEAR, 49 William Street, Melbourne.

SOUTH AUSTRALIA.—GARDENERS' SUPPLY STORES CO-OPERATIVE SOCIETY LTD.,  
New Market, Grenfell Street, Adelaide.

TASMANIA.—THE PORT HUON FRUITGROWERS' CO-OPERATIVE ASSOCIATION LTD., Hobart.





## POULTRY MANURE.

The neglect which poultry manure often receives from fruitgrowers is all the more notable in view of the high value put by agriculturists upon organic manures as compared with artificial fertilisers. Only in those cases where the birds are kept more or less permanently on grass or arable land is the manurial value fairly completely realised. The loss occasioned by careless handling of the accumulated manure from roosts and coops is considerable, and may amount to about one-half of the original value.

The quantity of poultry manure made under different conditions has been ascertained by the British Ministry of Agriculture, the most complete figures relating to fowls. Calculated on the basis of 100 head some typical results are approximately as follows:—

| 100 Head.                         |
|-----------------------------------|
| Breeding fowls . . . . .          |
| Chickens (hatching till 13 weeks) |
| Fattening birds . . . . .         |

A thousand fowls will produce about 1 cwt. of manure per day in the houses and a similar amount outside. The annual production for England and Wales is estimated to be at least one million tons.

**Composition.**—The composition of poultry manure depends on the type of bird from which it comes, fattening fowls giving a richer dung than those which are laying. The fresh manure is a rich fertiliser compared with farmyard manure; while air-dried poultry manure, though poorer than good guano, has a composition similar to that of rape cake. The following are typical analyses (figures being percentages):—

|                  | Manure from birds at liberty. |          | Manure from fattening birds. |          | Good Farmyard manure. |           |
|------------------|-------------------------------|----------|------------------------------|----------|-----------------------|-----------|
|                  | Fresh.                        | Air Dry. | Fresh.                       | Air Dry. | Cake Fed.             | Rape Cake |
| Moisture . . . . | 59.5                          | 10.0     | 70.3                         | 15.0     | 72.6                  | 10.1      |
| Dry Matter . . . | 40.5                          | 90.0     | 29.7                         | 85.0     | 27.4                  | 89.9      |
| Nitrogen . . . . | 1.75                          | 4.00     | 2.28                         | 6.52     | .77                   | 5.3       |
| Phosphoric Acid  | 1.00                          | 2.27     | .97                          | 2.77     | .39                   | 2.5       |
| Potash . . . . . | .54                           | 1.22     | .55                          | 1.57     | .60                   | 1.5       |

Regarded as a fertiliser, fresh poultry manure is richer in nitrogen than

| Treatment per acre.         |                        | Hay: Cwt. per acre. Average over six seasons. |
|-----------------------------|------------------------|-----------------------------------------------|
| No manure . . . . .         |                        | 9                                             |
| 4 cwt. superphosphate, plus |                        | 15½                                           |
| " " " . . . . .             | 1 cwt. nitrate of soda | 31                                            |
| " " " . . . . .             | sulphate of ammonia    | 30                                            |
| " " " . . . . .             | dried blood . . . .    | 30                                            |
| " " " . . . . .             | fish meal . . . . .    | 31                                            |
| " " " . . . . .             | guano . . . . .        | 31                                            |
| " " " . . . . .             | 4 cwt. fowl manure .   | 30                                            |

it is in phosphates and potash. It contains about 2½ times as much nitrogen and phosphate as an equal weight of farmyard manure, but only about the same amount of potash. The bulk of the nitrogen is present in an easily fermentable form. The manure is, therefore, quick-acting, and care must be taken in storage or much of the valuable ammonia will

poultry manure and a series of nitrogenous manures each providing the same amount of nitrogen as in 1 cwt. of nitrate of soda.

Under the above conditions poultry manure was about as effective as one-quarter of its weight of nitrate of soda (or its equivalent in nitrogen), and would, therefore, be worth about £3 per ton at present prices.

**Treatment.**—Eight to ten cwt. per acre of poultry manure constitutes an ordinary dressing for farm crops, although in market garden and orchard work larger quantities may be used,

and to apply this amount evenly a fairly good physical condition is necessary, the fresh manure being too sticky and the air-dry manure too lumpy to be easily handled at this rate. The point to aim at in the management of the manure is to dry and pulverise it with as little loss of nitrogen as possible. Peat moss, sawdust, and gypsum are sometimes used for this purpose, but fine dry soil is quite effective and has the advantage of being readily available. Alkaline substances, such as lime or wood ashes, should not be used, for they cause loss of ammonia through volatilisation. In dealing with the accumulations of manure in houses and coops a good practice is to make shallow layers of the manure and of dry earth alternately in the proportion of about two parts of manure to one of earth. The heap is kept under cover and turned occasionally till it becomes dry and friable. Another method which favours quicker drying is substantially the same except that each layer of manure covered by earth is kept on a separate tray, the trays being stored in tiers in a shed. The fertiliser balance of poultry manure may be improved by the addition of superphosphate and of some source of potash such as potash salts or kainit. For manure, dried as described, suitable additions would be:—

Superphosphate at 1-5th of the weight of the soil-dried manure.

Kainit or potash salts at 1-10th of the weight of the soil-dried manure.

The compound thus obtained could be used at from 15 cwt. to 1 ton per acre as a general manure, or, if preferred, the artificials could be applied as a separate dressing.

# Pullets Stopped Laying

were given "Karswood"  
—then immediately  
—commenced again



IT is well known that poultry are very susceptible to the reverse of natural conditions—that is, as regards egg-laying, changes of temperature especially being one of the most adverse influences. As a further and recent sample of the value of Karswood Spice (which contains dried and ground insects), even under severe changes of weather, read the following testimonial:—

Miss J. M. Fowles,  
Yarragon.

"I have been a user of Karswood Poultry Spice for some time, and cannot speak too highly of it, both as a tonic, and egg producer. I have made several experiments with this Spice, and am convinced that it increases the egg production, by a big percentage. A short time ago I had a flock of 80 pullets laying nicely, but was not at the time using your Spice, owing to being unable to obtain it locally. A very severe change of weather came on, with the result my pullets practically stopped laying. I immediately obtained a supply of "Karswood," with the result that the whole flock was again in full swing within three weeks. I think the best recommendation I can give Karswood, is by stating that I will never be caught again without a supply on hand. You are at liberty to use this as you wish."

## "10 EGGS A DAY FROM 11 HENS."

"... I have been using 'Karswood' Poultry Spice for 6 months, and after a fortnight's use I have not been a single day without eggs. Previous to this, my birds, although well fed, simply would not lay except an occasional egg. They are getting exactly the same quantity and manner of food now as previously, yet for the past six months I have had seven-ten eggs per day from only eleven hens, and this through the winter months. I think 'Karswood' is 'Great,' and I now want to try 'Karswood' Pig Powders, too, and watch results."

(Sgd.) MRS. V. SIMMONS,  
Gippsland, Victoria.

## 122 EGGS—27 DAYS—6 HENS.

"... Advertising to your letter of the 21st instant, relating to 'Karswood,' kindly note that I have no objection to you using the facts I have placed before you for advertising your Spice. I mentioned that my first hen commenced laying on the 20th May, 1923, and the 6th in July (this bird made too much flesh), so I therefore claim 7 days to average up the time between the 1st and 6th, when some had not commenced laying. There-

fore, counting the three months up to to-day (27th August), my total of eggs produced stands at 352 (three hundred and fifty-two), rough average 3-4-5 per day for 92 days. The number of eggs received this month stands at 122 for 27 days—average 4½ per day. I am agreeable that you substitute these figures for those in my previous letter, should you deem it advisable. You will be notified from time to time of figures, etc."

(Sgd.) C. R. NEVILLE,  
"Warreen," 15 Gordon St., Brighton Beach.

## MAKE THIS TEST.

Go to your local Grocer, Storekeeper or Produce Dealer. Get a 1/- packet of "Karswood" Poultry Spice, give it to half a dozen of your birds in accordance with the directions on the packet. Do not expect immediate results. "Karswood" works naturally, not suddenly. It takes at least a fortnight or three weeks to produce results, but they are good and sure.

## NOTE THE ECONOMY.

1/- packet supplies 20 hens for 16 days.  
2/- packet supplies 20 hens for 32 days.  
13/- (7lb. tin) supplies 140 hens for 32 days.

## SUPPLIES.

"Karswood" Poultry Spice is obtainable from all Stores and Poultry Food Suppliers at the following standardised prices:—

|              |      |
|--------------|------|
| ½ lb. packet | 1/-  |
| 1 lb. "      | 2/-  |
| 7 lb. tin    | 13/- |
| 14 lb. "     | 25/- |
| 28 lb. "     | 48/- |

If your local dealer cannot supply you, write direct to Messrs. Henry Berry & Co. Pty. Ltd. 380 Collins St., Melbourne, adding postage (6d. on half-pound packets and 9d. on one-pound packets)—to the above prices.



Owing to its rapid evolution of ammonia in the soil, fresh poultry manure may injure the roots of young plants. To avoid this, it is better to conserve and balance the nitrogen and to use smaller quantities, rather than to ferment away the most valuable constituent by turning over the fresh manure with straw and leaves as is sometimes done.

Unbalanced it is a forcing nitrogenous manure and suitable as a top dressing for green crops; it is also valuable for Strawberries, fruit trees and Tomatoes. For Turnips, grass, and on heavy soils it should be enriched in phosphate; for Potatoes, Mangolds; and on light soils, addition of potash as well as phosphates is required.

## Bee-Keeping.

### THE HOMING INSTINCT.

There has been considerable discussion in bee magazines concerning the "homing instinct," which is claimed to be a sixth sense, by which the bees could find their home from anywhere.

This is a very doubtful conclusion, as experiments prove.

If the hive is moved only six inches from its original position, in the bee's absence, it will be noticed that the returning bee is invariably somewhat bewildered by the change.

Whether they have a homing instinct or not, they are very careful

to make sure of the location of the hive in relation to such guide marks as trees, other hives, etc., when leaving it for the first time.

Anyhow, there are few spots within two or three miles that a field worker would not recognise after a few days of work, even without the existence of a sixth sense.

**Good Orchard Offering.**—A unique chance to secure a very desirable property is presented to our readers by advertisement in this issue. The owner is leaving the State, and desires to realise on his property. The area is 20 acres, of which 14 acres are laid out with fruit trees—Apples, Apricots and Lemons, all in third year. The house and outbuildings are new and well-appointed, and in first-class order. This is an opportunity for a young man to secure a very valuable and nicely improved property at a reasonable price. Particulars obtained from the "Fruit World" Office, 9 Queen-street, Melbourne.

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| Commercial Van     | - | - | £230 |

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| Lorry with Sides                           | - | - | £235 |
| Drop Side Lorry                            | - | - | £240 |
| Plain Top Lorry                            | - | - | £230 |
| Chevrolet Wagon                            | - | - | £265 |
| Chevrolet Van                              | - | - | £265 |
| Furniture Van                              | - | - | £270 |
| Lee-rolet Type Tipping Truck (metal body)  | - | - | £275 |
| Olding Type Tipping Truck                  | - | - | £275 |
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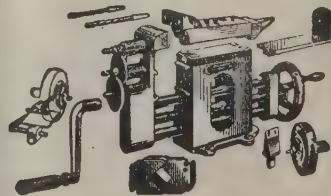
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## Special Notice to Fruitgrowers

In response to numerous requests from growers for information as to who are members of the **WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA**, the following list is given. All are members of the above Association, and are registered firms:—

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**T. Stott & Sons**, 11 Western Market, Melb.  
**F. Booth & Sons**, 15 Western Market, Melb.  
**H. L. E. Lovett & Co.**, 410 Flinders Lane, Melbourne.  
**A. E. Pitt**, 12 Western Market, Melbourne.  
**J. Davis**, 13 Western Market, Melbourne.  
**G. Woolf & Sons**, 3 Western Market, Melb.  
**W. S. Tong**, 4 Western Market, Melbourne.  
**Silk Bros.**, 441 Flinders Lane, Melbourne.  
**J. G. Mumford**, 449 Flinders Lane, Melb.

**J. W. Ross**, 6 Western Market, Melbourne.  
**W. Sweeney**, 14 Western Market, Melb.  
**J. H. Young & Co. Pty. Ltd.**, 7 Western Market, Melbourne.  
**D. Smith Pty. Ltd.**, 480 Flinders Lane, Melb.  
**Silbert, Sharp & Davies Pty. Ltd.**, 17 Western Market, Melbourne.  
**A. Millis & Sons Pty. Ltd.**, 5 Western Market, Melbourne.  
**W. A. Watkins**, 62 King Street, Melbourne.  
**P. A. Patrikeos**, 31 William Street, Melb.

The whole of the **QUEENSLAND FRUITS** sold in Victoria, is handled by members of the **WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA**, under appointment by the Committee of Direction of Fruit Marketing, Brisbane, Queensland.

**GROWERS PROTECT YOURSELVES** by consigning to members of the **WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA**.

Correspondence is invited by the Association.

**J. D. FRASER**, Secretary, 325 Collins Street, Melbourne.



## Drying Apricots.

### How to Produce a Good Quality Article.

For the best quality products, Apricots should be allowed to remain on the tree until fully ripe, but not over-ripe. The method generally adopted locally (states the N.S.W. Department of Agriculture), is to pick the fruit carefully into cases when it is fairly soft, as in that condition it makes the best dried article. This will probably necessitate going over the trees several times, as the fruit does not all ripen at the one time. As soon as possible, cart the cases to the cutting shed, where the fruit should be care-

fully and evenly cut in halves (not pulled apart), and the pits removed.

The fruit is placed on trays with the cup side up, and as soon as possible each tray is removed to the fuming. This is of great importance, as once the fruit has been cut it must not be exposed to sun or wind, or its appearance will suffer.

When everything is ready, sulphur should be placed in the burner at the rate of approximately 1 lb. to every 200 cubic feet of room space. If possible, allow the fruit to remain in the sulphur room from eight to ten or twelve hours, or until the cup is full of juice. It can then be taken from the fumigator on the trays and placed on the drying ground.

When the sun is the sole or main

drying agent, a drying ground must be provided, and to facilitate economic working the ground must be laid out in such a way that the fruit can be carried on trucks to any part of the ground. It is one of the essentials of the drying ground that it should be as free from dust as possible.

When stone fruit is being dried it is better not to leave tracks or paths between the trays, but to cover the whole of the ground, so that there are only the outside trays to watch. The borders and any paths that are left should be kept well sprinkled with water.

Growers are advised to obtain the bulletin on "Fruit Drying" issued by the Department of Agriculture of N.S.W. The price is 10d. post free.

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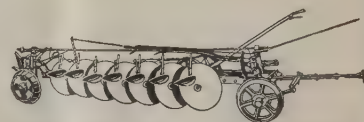
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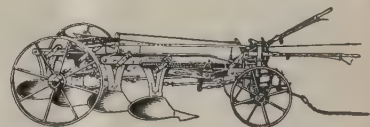
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**SUBSCRIBERS' PAYMENTS RECEIVED.**

The following are the subscriptions received from November 1st to December 10th. If any reader wishes to have a receipt, we will forward same on receipt of further word:—

R. L. Adams (June, '26), F. J. Andrews (June, '26), Mrs. S. Arnold (June, '26), J. P. Bainbridge (June, '26), E. H. Bisley (Nov., '26), J. Baldwin (June, '26), C. Bearpark (June, '26), G. Brown (June, '26), F. Burgess (June, '26), Canterbury Orch. Co-op. (June, '26), Chas. Cawood (July, '26), J. F. Childs (June, '26), P. Ching and Sons (Nov., '26), J. R. Dalton (June, '26), G. Deck (Nov., '26), J. Duce (Nov., '26), Fruchthandel Gesellschaft Scipio and

Fischer (July, '26), R. M. Finlay (June, '26), W. M. Gibson (June, '26), H. Gill, Jnr. (June, '26), A. J. Goode (June, '26), C. R. Glover (June, '26), C. Harris (June, '26), L. Hanlon (June, '26), J. H. Kidd (Nov., '26), J. Lang (June, '26), O. J. Muller (June, '26), — McNally (June, '26), Overseas and Interstate Trading Co. (June, '26), S. Phillips (June, '26), W. H. Passmore (June, '26), R. E. Petty (June, '26), D. Puckle (June, '26), E. Pool (June, '26), R. B. Pritchard (June, '26), E. Ray (June, '26), A. Scott (Nov., '26), F. Schultz (June, '26), B. T. Turner (June, '26), F. W. Tippet (June, '26), J. Vickers (June, '26), J. Valentine (June, '26), S. M. West (June, '26), J. F. Wynne (June, '26), T. C. Whiteside (June, '26), A. Zerbe (June, '26).

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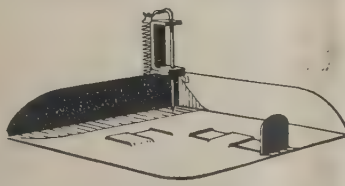
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Making a fence 72 chains long, you can save 12 days by using a "Seymour" Post Hole Digger. Reckoning that posts are 10 feet apart, you couldn't sink more than 30 holes (about 4½ chains) in a day with crowbar and spade, but you can sink 120 holes (about 18 chains) in a day with a "SEYMOUR" Digger. In addition to the speed, the "Seymour" Post Hole Digger cuts the hole just the size for the post, which means little ramming and a firmer fence. No more pressure is needed than to lean on the Digger and turn it to the right. Six half turns usually fills the Digger: and six times filling makes your 3-foot hole.

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**"FRUIT WORLD OF AUSTRALASIA."**

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of each Month.

**Editorial and Management Notices.**

**Articles and Photographs.**—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printer's MSS.," postage rate: 2 o/s., 1½d. Photographs, if sent in an open-ended package, marked "Photos. only," will travel at 2 o/s., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

**Subscriptions.**

The annual subscription, post free within Australia and New Zealand, is 8/6. All other places, 10/6, post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

**Advertisements.**

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States, as set out below.

Changes of copy for advertisements must be in our hands on or before the 17th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to sell that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

"The Fruit World" Offices (where copies and full particulars are obtainable) are as follows:—

**VICTORIA**—9 Queen Street, Melbourne

**NEW SOUTH WALES**—8 Bridge St., Sydney (J. H. Coghill, Mgr.)

South Australia: W. F. McConnell, Grenfell Buildings, Grenfell Street, Adelaide. Tasmania: Saunders & Co., Murray Street, Hobart. Western Australia: D. L. Hetherington, Colonial Mutual Buildings, St. George's Terrace, Perth. Queensland: Gordon & Gotch Ltd., Queen Street, Brisbane. New Zealand: Gordon & Gotch Ltd., Wellington. Dunedin and Auckland. Great Britain: Harvey H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

R. E. BOARDMAN, A.F.I.A., Managing Director and Editor.

E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director: HON. L. M. SHOO-BRIDGE, M.L.C.

**Personal.**

Dr. S. S. Cameron, Director of Agriculture in Victoria, recently visited Tasmania to report on the reorganisation of the Agricultural Department in the Island State.

Mr. Percy Everett, an Orchard Instructor of the New Zealand Department of Agriculture, visited Australia during December and January, with a view to securing first-hand information in connection with the fruitgrowing industry.

Mr. Everett got into touch with the various fruitgrowers' organisations, and saw as much of conditions in Victoria as his time permitted, including a trip to Mildura. It was a pleasure to see this enterprising departmental officer.

Cr. J. Jordan, of Burwood, President of the Metropolitan Fruitgrowers' Association, expects to leave shortly for a tour of Great Britain and the Continent. Mr. Jordan will be accompanied by his wife.

Mr. W. O. Johannson, General Secretary of the Sanatorium Health Food Company, paid a short business trip to Queensland recently. Mr. Johannson has done a good deal of travelling lately throughout the several states in connection with the company's establishments.

Mr. H. D. Howie, Chairman of the Australian Dried Fruits' Association, visited Western Australia during January, urging legislation to control supplies as in Victoria and South Australia. If Western Australian growers sent their fruit to the Eastern States it was impossible to maintain prices.

At the invitation of Messrs. Weddell and Co., Melbourne (agents for the Simons fruit brokerage organisation, of Southampton, Liverpool and Glasgow), members of the Victorian fruit exporting trade met Mr. Montague C. Mascart at a luncheon during January.

Mr. Mascart gave much valued information concerning the fruit trade of Great Britain and Australia's expanding share therein, and was cordially thanked.

Captain William J. Wade, M.B.E., representative for Australasia for the Port of Manchester (the Manchester Ship Canal Company), whose headquarters are at 8 Bridge Street, Sydney, left on the 20th January, by the S.S. "Riverina," on a business trip to Hobart. If time permits he will also make a short trip to Launceston.

Captain Wade is accompanied by his daughter Miss Eileen Wade.

Major H. Dakin, chief agent in Australia for Messrs. Geo. Monro Ltd., left Sydney on the 2nd January for West Australia, and after visiting Adelaide and Melbourne, has since returned to his headquarters, Goldsbrough House, Macquarie-place, Sydney. The trip was made purely for business purposes.

Mr. H. G. Colombie, overseas fruit exporter, who is the Australian representative of Messrs. Isaacs and Sons Ltd., London, and other leading fruit brokers, now has his office at Temple Court, Collins-street, Melbourne.

**DEVELOP WINE INDUSTRY.****Dried Fruits Overdone.****Views of Victorian Agent-General.**

Mr. George Fairbairn, Agent-General for Victoria, who has returned for a short visit, is consulting the Government re synthetic wool and the general export of primary products.

Mr. Fairbairn sees no large future for Australian Dried Fruits in England, where the Greeks can undersell us, despite the preference. The Greeks, he states, working at 2/- a day, come into competition with us. We should devote more attention to wine, which is coming into popular favor by leaps and bounds. On the Continent our wine is re-conditioned and sold under another name. The impression seems to be that there is an unlimited market for our wines.

Owners of small irrigated farms should plant a good wine Grape instead of contesting the dried fruit market with the Greek.

Mr. Fairbairn directs attention to the necessity of developing our larger industries—wool, beef, mutton, lamb and wheat—and wine in preference to dried fruits.

\* \* \*

On the other hand Mr. J. M. Bal-four (chairman of the Victorian Dried Fruits' Board), states that the Australian Sultana is superior to both the American and Greek product, and commands a satisfactory price in London. Great Britain imports 150,000 tons of dried fruits annually, of which Australia could only supply 30,000 tons. In view of the possibility of prohibition, it would take some hard thinking before a large extension of Wine-Grape planting could be advocated.

# New South Wales.

Farm Produce Agents' Bill.

Mr. G. Valder retires.

District News and Notes.

(By Our Correspondent.)

## Curlwaa Irrigation Area.

During the three months ended 31st December last, weather conditions were exceptionally favorable for the production of fruit on the Curlwaa Irrigation Area, the season generally being cool and pleasant, but including a period of warm weather in the latter period of the quarter, ideal for the ripening of early fruit, such as Apricots. The rainfall in October was 5 points, November 28, and December nil, making a total of 33 points. The third irrigation of the season finished on 16th December, when 1,455 acres were watered.

The Apricot crop was good, but the citrus setting for the year was poor, probably due to the heavy frosts experienced during the setting period.

The absence of insect pests on the Area has been very noticeable; all the citrus inspected during the period being exceptionally clean and healthy.

During the period the management of the settlement changed hands, Mr. J. W. Searcy, resident engineer, Curlwaa and Coomealla, having resigned from the Commission's employ on the 30th November, 1925. Mr. H. Wagstaffe has succeeded him as engineer and manager.

## Farm Produce Agents' Bill.

Fruitgrowers in New South Wales are glad that at last the Farm Produce Agents' Bill has been passed, limiting the powers previously held by the commission agents.

For many years Sydney has had a surprisingly large number of agents—about 300, it is estimated. Growers are fully convinced that such a large number is unwarrantable, and hope that as a result of the new legislation many will be eliminated, and that the business of fruit selling will be concentrated among the better class of salesmen.

Mr. H. G. Such, manager of the N.S.W. Central Citrus Association, gives the following instance demonstrating the necessity for legislation of this kind—legislation which has been in existence in Queensland and Victoria for several years:—

A citrus packing house sent 360 cases of Mandarins to Sydney, splitting the consignment into three, viz., 120 cases to separate agents. The sales were spread over four days. No. 1 agent returned 1/6 per case as the

price received by him on each of the four days. No. 2 returned prices 2/6 to 5/-. No. 3 returned prices 3/6 to 6/6, a fair average market price. No. 1, when questioned, was offensive, said the fruit was inferior, and that he sold it to a hawk. That the same price—1/6 per case, no more, no less—should have been received for four days in succession was deemed remarkable, but though requested, the agent refused to produce his books in support of his statement.

\* \* \*

One of the provisions of the new Act is that the books of the agents shall be available to the Registrar or his nominee.

Other provisions are:

That all moneys received for consignments on behalf of growers shall be paid into a trust account.

Agents must provide a bond of £500.

[This is the provision which, it is expected, will eliminate the weaker men.]

A registrar is to be appointed, empowered to issue licences annually, and to cancel or withhold licences under prescribed conditions.

Agents must advise the prices received within seven days, and send on account sales and cheques within 14 days of sale.

Agents must not purchase fruit or farm produce consigned to them without the consent of the owner in writing.

To prevent "forestalling," Section 21 reads: "Any person who in any market buys any farm produce wholesale, and afterwards in the same or in another market within three miles, sells the same farm produce wholesale at an enhanced price, shall be guilty of an offence under the Act.

The Governor (through his Minister) is empowered to prescribe the form in which the agents' books shall be kept, and the amount of the agents' commission, etc.

In order to make it more emphatic, Section 31 is printed in black type in the Act, thus—

If within one year the Governor is satisfied that any company which is . . . carrying on business . . . substantially in accordance with co-operative principles, the company shall not be

deemed to be a farm produce agent within the meaning of this Act.

## DECIDUOUS GROWERS CONFERENCE.

### Marketing Problems Discussed.

A conference of Deciduous Fruit Growers was held at Young, New South Wales. Mr. Walker of Bathurst, occupied the chair, and there were present Messrs. Edgell, Peacock, and Jenkins of Bathurst; Arnot and Dodds representing Batlow; Mrs. Piddington of Running Stream; also representatives from Griffith, Leeton, Orange, Young and Milthorpe.

Mr. Brooks, from Orange, read a most interesting paper, dealing principally with the marketing problem of fruit, which after all, is the most serious matter confronting the grower.

The principal question dealt with was the levy of 1d. per case on all deciduous fruit, the levy to be used for the payment of a market representative in Sydney to watch the interests of the growers. A long discussion ensued, objection being raised to the levy by representatives who came from districts where the growers were organised, which organisations more or less protected the grower, and it was pointed out by several speakers that, although the Deciduous Fruit Growers' Association might decide on making a levy, there was no means of collecting it or any guarantee that the deciduous growers would be satisfied to continue paying that levy.

It was therefore decided that all delegates should return to their district and strongly urge that where a local co-operative society did not exist, to control and standardise packing of the fruit from that district, such should be constituted, and when that end had been accomplished, there would be no difficulty in each co-operative society subscribing under an agreement to the Deciduous Fruit Growers' Association the necessary funds to look after the interests of the grower.

It was also recommended that the New South Wales Government be approached with reference to certain clauses which should be inserted in the new Agents Bill, dealing particularly with registration of agents, provision of a bond, and the inspection of the agents books, as well as the issuing of receipts for all goods sold.

Colonel Herrod, Secretary for the Fruit Growers' Federation of New South Wales, acted as secretary, and his extensive knowledge of the industry enabled him to give advice to the delegates which was much appreciated.



### Murrumbidgee Irrigation Areas.

Leeton, 18th January.

Fruitgrowers on the Area are anxiously awaiting information as to the effect of the approachment to the Federal Government as regards a bounty. As far as the Leeton cannery is concerned, its relations with the growers are of an amicable character.

The Apricots have been disposed of in a fairly satisfactory way, and the cannery will absorb 600 tons of free-stone Peaches, including the Elberta. Cannery labor is more plentiful than usual.

Drying is being carried on in a more extensive manner than previously, and motor lorries are now traversing the Riverina from Yanco with an abundance of fresh and dried fruits.

The N.S.W. Railway Commissioners are evincing greater energy in helping forward the transport of our products to Sydney. This was badly wanted.

### Fruit Crop Report.

An interesting review of the crop anticipations for the State of New South Wales, dated December 24th, is to hand from Mr. G. Valder, then Under-Secretary and Director of Agriculture for New South Wales, as follows:—

**Apples.**—Generally speaking the Apple crop in New South Wales will be below the average. Granny Smith is showing up better than most varieties, and in certain localities are carrying heavy crops.

The Apple trees are looking well, and there is practically no black spot showing. There is a promise of good quality which should in some measure compensate for lightness of crop.

**Pears.**—In some localities certain varieties are carrying heavy crops, but on the whole the crop although perhaps a little heavier than the Apple crop, will be below the average. As in the case of Apples the trees are looking well and the fruit promises to be of good quality.

**Peaches.**—On the Murrumbidgee Irrigation Area where Peaches are principally grown for canning purposes, the crop is a medium one. In the coastal districts and tablelands the crop ranges from medium to good.

**Apricots.**—Generally speaking there is a good crop of this fruit, very good both in quality and size.

**Plums.**—Generally speaking Plums give promise of a good crop. In many districts a good crop of Prunes is anticipated.

**Orange and Mandarin.**—The crops for next season in the coastal and in-

land districts generally speaking are much lighter than last season. The setting of Valencia in particular is very patchy. On the Irrigation Area the setting is more generally light than in coastal districts, especially on those trees which bore heavily last season.

**Sultanas.**—Crop is light to medium. **Table Grapes.**—Medium crop (Ohanez, light crop).

**Wine Grapes.**—A good crop is almost general.

### MR. GEO. VALDER.

#### Warm Tributes of Appreciation on His Retirement as Under-Secretary for Agriculture.

Having come to the State service retiring age, Mr. Geo. Valder has relinquished office as Under-Secretary for Agriculture in N.S.W. During his long service in this capacity, Mr. Valder showed marked ability, tact, and courtesy, and he was instrumental in effecting many improvements in the agricultural, pastoral and horticultural industries.

Mr. Valder was the recipient of many tributes of warm appreciation. Not the least pleasing of these came from a gathering of the permanent heads of the State Departments, when a gold watch, suitably inscribed, also a chain, was presented.

Mr. Ross succeeds Mr. Valder as Under-Secretary for Agriculture.

We have to thank Mr. G. C. Somerville, Secretary of the Royal Agricultural Society of New South Wales, for a copy of the schedule of prizes in connection with the forthcoming Easter Show, which is to be held at the show grounds, Moore Park, from the 29th March to the 7th April next. Included in the contents are full particulars as to entry fees, conditions of competition, control of exhibits, prizes to be awarded, and detailed information for the guidance of exhibitors.

In the fruit section there are many prizes offered for almost every kind of fresh and dried fruits and Lemons, both for local consumption and export.

### APPRECIATION.

Kentucky, N.S.W.,  
20/1/26.

"I am very pleased with the 'Fruit World.' I think it well worth the money. I always look forward to receiving it every month.—G. E. Whitby.

### GOSFORD.

#### A Progressive District.

#### Citrus Packing House is Organised on Sound Lines.

A GENERAL meeting of members of the Gosford District Citrus Packing House Ltd. was held at Gosford on January 21st. Mr. T. R. Coulson presided: 43 shareholders attended. Apologies were received from Messrs. Alford, Bassan and Davidson.

**Annual Meeting.**—It was decided to hold the annual meeting at the Packing House on February 25th.

**Management and Executive Committees.**—A long discussion on the present constitution of these two committees took place. Mr. Pring suggested that a committee of management of 10 members as at present, meeting once a month, was satisfactory, but that the executive committee should consist only of three, meeting once per week.

Messrs. Sanders, Chapman, Dodd, Bourke, Morrison, Arnot and the president also supported these views, and Messrs. Brandis and Jenkins opposed them, and were in favor of the full committee of management meeting once per week, or as often as necessary.

The following notices of motion were then submitted:—

1. By Mr. C. G. Brandis—That a committee of six be appointed to meet at least once per week, and that the executive committee be dispensed with, and that Articles of Association be amended accordingly.
2. By Mr. G. Cross—That the Articles of Association in respect to the committee be altered, and provision made for the election of an executive of three to meet once a week, and that a general meeting of the whole of the shareholders be held once each month.

**Annual Picnic.**—Resolved that the annual picnic be held again this year, and that the same committee as last year be appointed, to organise and conduct the function.

**Shares.**—It was suggested by Mr. Sanders, and supported by Mr. Harvey, that growers be requested to bring their shareholding up to date by applying for shares to cover the new acreage that had come into bearing since the last application.

**Export.**—A short discussion then took place on the present conditions of export to U.K. and the East.

**Guarantors.**—The President pointed out the urgent necessity for increasing the capital of the House to keep pace with the large extension in direct trade, and to bring the House more up-to-date by the addition of improved plant to more economically and efficiently handle shareholders products.

The committee of management were anxious to obtain an increased overdraft from the bank, to be secured by guarantors under the Limited Liability Guarantee as at present in force. He pointed out that less than forty members, out of a total membership of 200, were at present guarantors, and made an earnest appeal to all growers who were in a position to do so to become guarantors to the amount of £50. Ten of the members present later signified their willingness to become guarantors.

It was resolved that a circular letter be sent to each shareholder who is not already a guarantor, pointing out the necessity for increasing the capital of the House, and asking each shareholder, if possible, to co-operate with his fellow growers by becoming a guarantor.

Several shareholders spoke on the question, and the Chairman asked each member present to induce any of his neighbours who were not already guarantors, to undertake this responsibility.

#### THE NORTHERN SUBURBS AGRICULTURAL AND HORTICULTURAL ASSOCIATION'S SHOW.

THE SIXTH annual show was held at St. Ives, which is distant 13 miles from Sydney, on the North Shore railway line, on the 15th and 16th January. It was a two-days' show, and excellent entries were received in all sections. There was a very fine display of flowers and particularly fruit of all varieties. St. Ives is noted for its excellent soil in the production not only of almost every kind of fruit, but in flowers and vegetables. The attendance on the second day numbered over 4,000. The show was held on land comprising 50 acres, which was made a grant to the Society by the New South Wales Government. Previous shows were held on the old Show Ground, some distance away. The Show Ground was reached after a four miles' motor run from the Pymble railway (North Shore line). It is understood a short railway line is to be laid down which will not only drop visitors right up to the show gates, but will be a feeder for orchardists in outlying parts of St. Ives, which will enable them to

bring their produce direct to the main Northern railway line. The country surrounding St. Ives is ideal for fruit growing, and has some very large and prolific orchards. Speaking to several of the Apple growers, our Sydney Manager was informed that it was no uncommon thing to find growers getting as much as thirteen shillings a case for Apples, which is ample proof of the condition of the St. Ives soil for fruitgrowing.

The horticultural display might have been on a larger scale, yet there were some excellent blooms exhibited.

The poultry section was very large, and the many varieties of birds shown would do credit to any metropolitan exhibition. On the whole the St. Ives show was a success in every way, and it can be confidently expected that next year's show will bring many more exhibits of fruit, flowers, and poultry for display.

The show was officially opened by Mr. T. R. Bavin M.L.A., (leader of the State Opposition Parliament), and expressed regret at the absence of the Minister for Lands (Mr. P. Loughlin). The success of the show was due to the indefatigable energy of all the officials, including of course the President and Secretary.

#### IMPORTANT ANNOUNCEMENT.

##### Sydney's Wonderful Easter Show.

March 29th to April 7th.

IN view of the forthcoming Royal Easter Sydney Show, which opens at the Moore Park Show Grounds, Sydney, on the 29th March, and closes on the 7th April next, (including 5 nights), we desire to draw attention to the fact that we intend publishing a special March number of the "Fruit World" in connection with the above show.

Special features will be made of the progress shown by the Royal Show.

There will also be interesting exhibits from the fruitgrowers and those allied to the horticultural industry, as well as poultry.

This Special Show number will appeal to the "Fruit World's" many readers (both interstate and overseas).

**Fruit Section.**—Entries in this section at the Show close 5th March, for the following classes:—Lemons for export—(packed case). Apples in open classes. District collection of Pears—1st prize—£60. Collection in this class to be staged in pyramid trophy form. District collection of Apples—1st prize—£200. Collection in this class to be staged in pyramid trophy form.

Apples for export in case. Dried fruits. Oranges (in open classes). Grapes—(not less than six pounds in each class).

In each class there is a first, second and third prize.

In the section for Apples for export (in case), Messrs. Geo. Monro Ltd., Covent Garden Markets, London, Manchester and Hull (Sydney agent—H. Dakin, Macquarie Place, Sydney), are giving three guineas for the best bushel case of Apples for export, and to be judged for variety of fruit, quality, packing, grading and case.

The entrance fee in all classes is 5/- non-members, and 2/6 members of the society. With the exception of Lemons for export in case, Grapes, open classes, district collection of Pears, and Apples—5/- entry.

**Poultry Section.**—All poultry must be penned, and eggs must be benched by 9 p.m., on Monday, 29th March, 1926. In this section there are prizes for the best breeding teams, utility poultry, standard poultry, fancy poultry, table poultry, breeding pens, poultry farm exhibit, and eggs.

As this year's Show is to be on a gigantic scale, and as the fruit and horticultural exhibits will be very largely catered for, this is a splendid opportunity for advertisers to take up a prominent advertising space in our Special March Sydney Show number.

Applications for advertising space will be received by J. H. Coghill, Sydney Manager of "The Australasian Fruit World," 8 Bridge Street, Sydney, up to the 15th March, 1926.

#### SHOWS TO COME.

|                           | February.    |
|---------------------------|--------------|
| Leeton . . . . .          | 9, 10        |
| Castle Hill . . . . .     | 19, 20       |
| Uralla . . . . .          | 23, 24, 25   |
|                           | March.       |
| Penrith . . . . .         | 5, 6         |
| Glen Innes . . . . .      | 9, 10, 11    |
| Mudgee . . . . .          | 9, 10, 11    |
| Batlow . . . . .          | 16, 17       |
| Armidale . . . . .        | 16, 19       |
| Royal Easter Show . . . . | 29 to Apl. 7 |
|                           | April.       |
| Orange . . . . .          | 20, 21, 22   |

\* \* \*

Secretaries are invited to notify the Editor, "Fruit World," of the dates of their Shows.

Reports of Fruitgrowers' Association meetings, conferences and shows are invited for publication.



## Victoria.

### Fruit Marketing Organisation.

#### "Peach Week."

"Peach Week" was officially opened by the Minister for Agriculture (Mr. Bouchier) on January 29. The special aim is to dispose of large quantities of Elberta Peaches, as the factories will not accept same for canning. The Manager of the Fruit Marketing Organisation of the State Advisory Board (Mr. B. S. B. Cook) reports that the wholesale fruit merchants and the retailers are working enthusiastically in pushing the scheme, being convinced that it will increase the consumption of fruit. Prizes are offered to shopkeepers as follows:—1st, £20; 2nd, £10; 3rd, £5, and there are also ten consolation prizes of £1. Judging will take place from February 1st to 6th. Points will be awarded thus:—Attractiveness of display (40 points), advertising value (40), originality of design (20).

#### Railway Department Assists.

The Victorian Railways Department, which has always shown great activity in assisting the fruit industry, is helping by arranging for the sale of bags containing 5 to 6 lbs. of Peaches: the bags are strong, complete with handles, quite handy and convenient for the purchaser. Price 1/-.

Stationmasters from all parts of the State are sending in orders for case and half case lots.

There was, however, a shortage of Apricots, and some money had to be returned to senders; also with white-fleshed Peaches; the fact that there has not been a connected continuity of supply delayed the fulfilling of some orders.

Altogether, as a result of this State-wide effort, which is financed by the State Government to the extent of £2,000, it is hoped that results of permanent value will accrue to the fruit industry.

There are problems to be overcome—fluctuations in market prices, and the arranging of regular deliveries.

### STATE FRUIT ADVISORY BOARD.

#### Proposed New Basis.

The Minister of Agriculture (Mr. Bouchier) has given effect to a promise made some time ago that he would have members of the State Fruit Advisory Board re-elected early this year. The Minister has given instructions for the necessary steps to be taken to ensure that the present members of the Board would retire at the end of January, and the Asso-

ciations representing each particular section asked to elect representatives. He added that the constitution of the Board would be as follows:—

Apple and Pear Growers' Section: Two representatives, to be elected by Victorian Fruitgrowers' Central Association and/or other associations.

Citrus Growers' Section: Two representatives, to be elected by Victorian Central Citrus Association.

Canning Fruit Growers' Section: Two representatives, to be elected by Northern Victoria Fruit Growers' Association.

Berry Fruit Growers' Section: One representative, to be elected by United Berry Growers' Association.

Table Grape Growers' Section: One representative, to be elected by Ohanez Grape Growers' Association.

Department of Agriculture: One representative, to be elected by Department of Agriculture.

Federal Government: One representative, to be elected by Customs Department.



Miss F. McKay, of Merbein (Vic.), in her prize winning "Eat More Fruit" Costume.

It was pointed out by the Minister that previously the wholesale distributors and fruit exporters had each been represented on the Board by one representative. It was felt, however, that embarrassment was sometimes caused when questions affecting markets and agents were being discussed, and he thought that the better method would be for the Board to confer with agents and exporting firms as occasion warranted. Dried fruit representatives had also been omitted owing to that section being now catered for by the Dried Fruits Board. He considered that the most satisfactory method of electing representatives of the various sections was through the respective fruitgrowers' associations.

### HARCOURT.

The weather continues dry, but fortunately there is abundance of water for irrigation.

The Apples and Pears are looking well, being clean and well grown, and most of the orchards bear a good crop. Buyers for overseas markets have been active, and large quantities have been sold at satisfactory prices.

Packing sheds are proving their value to the grower in this district. The one being erected by the Fruit-growers' Association is nearing completion. Enlargements and improvements are also being made at the packing shed of the Fruit Supply Society.

### Harcourt Co-operative Cool Stores Ltd.

The balance-sheet for 1925 shows—Subscribed capital, £32,000; capital called up, £16,242; assets—land and buildings, £23,431; machinery and plant, £10,369.

During the year £687 was spent on fuel, and £852 on wages. The fuel bill was much heavier than anticipated, owing to a break down of the crude oil engine. It is now, however, in good running order, and the shareholders are hopeful of a good run in the future.

### EAT MORE FRUIT COSTUME.

#### Merbein Girl's Success.

Congratulations to Miss F. McKay, of Merbein, near Mildura, on her prize winning "Eat More Fruit" costume at a fancy dress ball recently held at Merbein, in aid of the Church of England.

The photograph appears on this page. We hope these examples will set the fashion for this mode of dress, and that the fruit industry will benefit by this charming method of directing attention to the advantages of eating "more fruit."

We must voice a word of caution, however, remembering the instance of a young man who told a sweet young lady she was a Peach, and before long they became a Pear.

### SHOWS TO COME.

|                              |        |
|------------------------------|--------|
|                              | March. |
| Diamond Creek . . . . .      | 13     |
| Yarra Glen . . . . .         | 17     |
| Somerville . . . . .         | 17     |
| Red Hill . . . . .           | 24     |
|                              | April. |
| Autumn Garden Week . . . . . | 13-16  |

### GRAPES FROM SPAIN.

Much interest was created when, at the instance of the Victorian Department of Agriculture, a keg of Spanish Almeria (Ohanez) Grapes was opened in the presence of an interested audience.

The Grapes opened up in splendid order. They had come from Spain to England in ordinary ship's storage, and re-shipped to Australia under cool conditions, being placed amongst the ship's vegetables (there

Swan, where the Grapes were grown without irrigation.

Mr. Castella is of the opinion that we must solve problems of cultivation. The Spaniards water their vines sparingly, the plants being deeply rooted. In our irrigation areas the number of waterings apparently lowered the carrying qualities of the fruit, especially the waterings close up to the picking time.

Here, then, is a subject in which there is much potential wealth, and which would amply repay definite

Elberta Peaches are also being sent from Kyabram and Mooropna railway stations to Sydney, louver trucks being used in the journey to Albury, and iced trucks from Albury to Sydney.

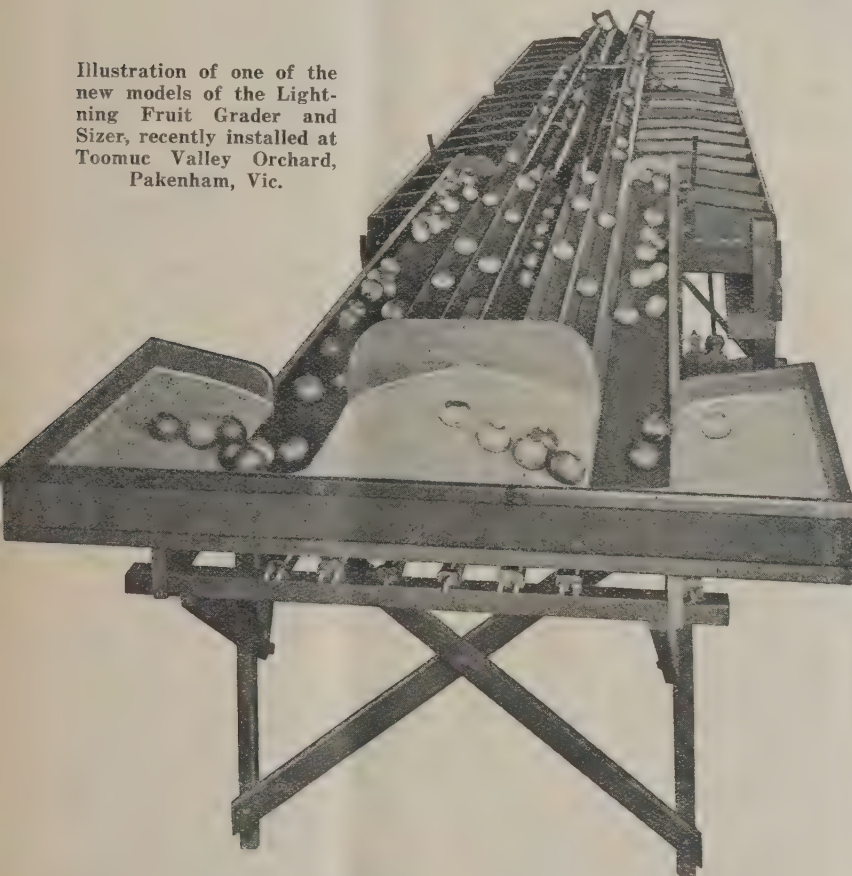
Mr. F. J. Churches is going on behalf of the growers to Albury to see the transference of the fruit, in order to make suggestions for improvement where possible. Mr. Churches is then proceeding to Sydney to observe the sales of the fruit, and generally to gather information which will be serviceable to growers.

### Canned-Fruit Growers Benefit by Organisation.

Due to the newly-formed organisation of growers of canning fruits, growers in New South Wales are to receive £10 per ton for their Cling Peaches (instead of £9, as paid last year), and £10 for Apricots (instead of £7). Thus the benefits accruing from organisation will result in N.S.W. growers alone receiving an additional £5,000 to £6,000.

The prices mentioned for this season's fruit have been agreed upon by the Irrigation Commission and the Sydney canneries—thus falling into line with the Victorian canneries, who agreed to pay £10 per ton, irrespective of the question of a bounty.

Illustration of one of the new models of the Lightening Fruit Grader and Sizer, recently installed at Toomuc Valley Orchard, Pakenham, Vic.



was no cold storage available) at a temperature of about 36 degrees F.

Mr. F. de Castella, the Government Viticulturist, states that the experiment demonstrates the possibilities in the shipping of Australian Ohanez Grapes to England, our fruit arriving there in the early summer, just when there was a keen demand at good prices. Ohanez Grapes had been successfully sent from Australia for many years past from the vineyard of Barrett Lennard Bros., at Upper

scientific research—the cultivation, growing, packing, storage and transport of Ohanez and other Grapes for export.

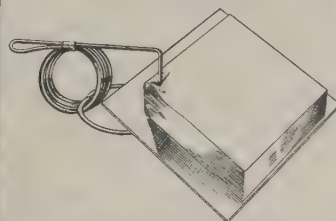
### ELBERTA PEACHES.

Use of Iced Railway Trucks.

Shepparton (27/1/26).

Two iced trucks are being used to send Elberta Peaches from Shepparton to Sydney on January 29th.

## The "CROFT" Paper Holder



(PATENT APPLIED FOR)  
FILLS A LONG-FELT WANT

Securely holds Wrapping Paper, and is self adjusting, as the sheets are removed.

This was recently invented by Mr. Arthur Croft, Engineer of the Harcourt Cool Stores. That it is a valuable aid to the fruit packer is proved by the large number of growers in the district who are now using it.

Price, 5/6. Postage 4d.  
Agents Wanted in All States

**F. R. MELLOR**  
440 ELIZABETH ST., MELBOURNE



## Queensland.

(By Our Correspondent.)

Brisbane (18/12/25).

### Fruit Crop Prospects.

**Deciduous Fruits.**—The limited quantity grown in coast lands have matured and been disposed of at satisfactory rates. Luring has again been resorted to in dealing with fruit fly, and for the third season in succession, and resulted in reducing its depredations to an inconsiderable minimum. A comparatively dry growing season is responsible for good sound fruit, the maintenance of quality, particularly amongst Peaches and Plums, being largely gauged by weather influences, as also is that destructive element, brown rot, which last season claimed a very heavy toll. Apples and Pears are carrying medium to heavy crops.

**Grapes.**—Following a rather erratic winter, growth was independent and irregular, and crop shows similar variations. On the whole, it is below the average quantity. Downy mildew has been well controlled.

**Citrus.**—Flowering, though profuse, was protracted. A heavy setting resulted, but this was more than counteracted by the excessive drop of young fruit. On the whole, a medium crop only can be expected. In instances where last season's fruit was permitted to hang late upon the trees a late or second flowering has been evidenced, but allowing fruit to develop from this, is, for various reasons, to be deprecated.

**Tropical Fruits.**—Bananas continue to maintain first place, though amongst older plantations, in rough country a decline is noticeable in the quality of the fruit. Supplies are shortly to be expected from the northern areas—the natural habitat of the Banana—and where future planting will command more attention. The product for 1926 promises to exceed that of the past year.

Though the area under Pines has not increased, the summer crop is not expected to be much short of that of previous years. A severe winter had a damaging influence on practically all tropical fruits included in the southern districts, but the effect has not been lasting. A trial shipment of Pines in cool chamber to England was forwarded by the "Moreton Bay" last month, but the condition of the fruit—an intermediate crop—is not considered favourable for accurate results.

Passion-fruit at one time figured largely in markets, but during the last few years has been on a continued decline.

Both the vines and fruit are subject to an injurious malady, which practically destroys the former, and so contorts and disfigures the latter as to render it almost valueless.

That the practical elimination of their crops by this agency has deprived numerous settlers of their livelihood, has not been recognised as sufficient reason for investigation by those responsible for attention to pathological questions.

### MARKETING ACT AMENDED.

Under the amended Fruit Marketing Act the Committee of Direction has lost its arbitrary powers: they can now issue a "direction," and a poll can be demanded by thirty growers, when a two-thirds majority is necessary to make the "direction" effective.

Brisbane (20/1/26).

**A** MODERATE crop grown and marketed under favourable weather conditions at enhanced prices, applies to early coastal fruits, including Grapes, this season.

Deciduous fruits of various grades and conditions, mostly satisfactory, are being received from Stanthorpe district, where fortunately the fruit fly is but sparsely present. Amongst back yard gardens

in the metropolitan area a supply sufficient to stock the Commonwealth is being matured without check or hindrance, and favourable wind only is required to deliver the granite belt its annual quota. In this area inspectors are constantly employed throughout the fruit season enforcing regulations re fallen fruit, principally on account of attack by fly migrated from other districts.

That the temperate fruit industry has invariably been in a parlous state, and must so continue while present indifference is manifested in coastal areas, more especially the metropolitan, is freely recognised, as is also the fact that an industry is assessed more by the number of votes it may command—or lose—to the politicians in power.

Consequently any attempt to clean up town areas by eradication of trees—no other means is reasonably possible (owing to the cost of supervision), is a subject for the distant future.

### Bunchy Top in Bananas.

The spread of the Banana plague, "Bunchy Top," to the north side of Brisbane, is occasion of serious concern, particularly as plants from infested areas have been distributed to other parts of the State.

The field staff of the Agricultural Department has been afforded the assistance of members of Bunchy Top investigation staff in an endeavour to locate the limits of extension of the disease, also formulate and apply means best calculated to encompass its eradication. That Bunchy Top has existed on the north side of Brisbane river has for some two years past been known to officialdom, but beyond issuing a regulation regarding the removal of plants from the infested district, nothing has been attempted to ensure its close application, nor the destruction of affected plants.

This apparent laxity on the part of field administration must be most liberally shared with those responsible for the financial control, who prefer that field officers should perambulate the country per boot or any odd means that may come their way when off the train, instead of being provided with efficient means of transport, which would not only increase efficiency by 70 per cent., but provide means of access to otherwise, to them, inaccessible places—Brookfield, of Bunchy Top fame, to wit.

That an industry worth much over £1,000,000 per annum is threatened with total extinction is of small moment to "office heads," compared with the saving (?) effected by failing to provide and maintain two or three motor cycles. That the disease amongst Bananas is not more widespread is due solely to fortuitous circumstances, and not departmental effort. Whether it can now be eradicated or controlled, is purely a matter of conjecture.

The prospect of further over-production of sugar has put rather a damper on the demand for sugar lands, and diverted attention to Banana culture in the far north, where in former years the Banana held sway. The rapidity of growth and early development in the wet belt of the tropics will, to a great extent, compensate for distant transport. The keeping qualities of the purely tropical Banana are much more lasting than where grown under sub-tropical conditions, and no difficulty is entertained regarding the landing of fruit in a satisfactory condition.

### Marketing Problems.

The marketing problem is still complicated. Anticipations (of those responsible) regarding the benefits of the growers (compulsory) organisation have been somewhat shattered by legal proceedings, also subsequent events, and when one notes street barrows bearing, in conspicuous let-

(Continued on page 78.)

# Fruit Drying.

(By C. G. Savage, R.D.A., Deputy Horticultural Instructor and Manager of Berri Experiment Orchard, River Murray, South Australia.)

An Address delivered before the Waikerie Branch of the Agricultural Bureau.

**I**N dealing with this question, it is my intention to touch upon each of the fruits in order of their ripening, and briefly describe the process recommended for each when the fruit is sun-dried.

\* \* \* \*

## THE APRICOT.

**A**PRICOTS are ready for harvesting from the middle of December to the end of January, according to variety. The fruit may either be dried whole or halved.

The fruit should be thoroughly ripe when gathered, yet firm enough to retain its shape when halved and placed upon the drying tray. The Apricot is halved or split by cutting around the sutural margin; see that the flesh is cut around the whole circumference to the depth of the stone; do not tear the fruit apart, otherwise the finished product will present a very ragged appearance.

The halves are placed upon wooden trays, with the "cup" uppermost. When sufficient trays are filled, they are placed in the sulphur box or house, and subjected to sulphur fumes from five to eight hours, according to weather conditions.

On hot bright days the bleaching of the fruit can be completed in a shorter time than on cold cloudy days or at night time. The fruit should be sulphured until the "cups" are practically full of juice; do not over-sulphur, as the overflowing liquid not only, when dry, sticks the Apricots to the tray, making the removal of same very difficult, but loss of weight results through the lost sugar and salts in the juice.

**Sulphuring** should be done as soon after the fruit is split as is possible, that is, before the cut surface has become dry. Should the fruit become dry before being placed in the sulphur box, sprinkle it with water prior to sulphuring.

From the sulphur house the fruit is placed on the drying ground, and exposed to the sun's rays; should hot weather be experienced, the Apricots will be ready for the sweat box in four to six days. If drying is going on too rapidly, after a couple of days in the sun the trays may be stacked and the drying completed in the stack. The fruit is ready for sweating while it is still pliable, and juice cannot be pressed from it when worked between the finger and thumb. The Apricot should be sweated for at least seven days prior to packing, in order to even up the moisture content.

To whole-dry the Apricot successfully, only the largest fruit should be used. Place the fruit in dipping tins, and pass it rapidly through a boiling lye (1 lb. caustic soda to each 30 gallons of water). The Apricots are then arranged one layer deep on the drying tray, and are all placed upon their sides.

The fruit laden trays are now placed in the sulphur, and are sulphured for about eight to nine hours. The fruit is then exposed to the sun, and will be ready for sweating in eight to 12 days. Should the weather be excessively hot, the fruit can be stacked after a few days, and drying finished off in the stack.

## THE PEACH AND NECTARINE.

**T**HESE FRUITS are treated in a similar manner as that described for the Apricot, with this difference, that the Peach is seldom dried whole, and the length of time for sulphuring is extended up to 12 hours at times.

Should rain intervene, it will be necessary to stack any fruit that may be exposed, and to so cover the stacks as to prevent the rain getting on to it. Open out the fruit to the sunshine as soon as the weather has cleared, as damp fruit on stacked trays, surrounded by humid air, is likely to mould very rapidly.

\* \* \* \*

## THE CURRANT.

**T**HE CURRANT is usually ready for harvesting at the end of January and during February, and should never be gathered until the full sugar content has developed. The Beaume reading of the must varies from season to season to some degree, but 13 deg. may be taken as guide when picking should commence. Early picking is a poor policy; as not only a sour dried product results, but loss of weight is very great; consequently the grower does not tend to create a favourable impression upon the consumer with poor quality fruit. Thus, the consumer in turn retards his buying, and sales are likely to be slower, and money is also lost in reduced weight gathered per acre.

### Two Pickings are Advisable.

If possible, two gatherings should be made from the vines, the dark colored berries should be picked first, the red bunches being left on the vines to darken up and are harvested at a later date. By this method more uniform colour will be found in the Currant pack.

Currants are gathered and placed directly upon the drying rack or tray. The netting tray is preferable to the wooden tray, and has also many advantages over the rack.

Experience has shown that if the Currant is exposed in the early stages of the drying process to the direct action of strong sunlight, the fruit is bleached to a certain degree, consequently the color is not uniform in the finished product. To overcome this disadvantage, the fruit is usually

### dried in the shade,

the racks are covered with hessian curtains along the sides, and if they are not fitted with iron roofs, hessian or canvas covers are placed over the tops, when the fruit is tray dried, the trays are stacked and covered, in the case of wooden trays the fruit must be turned after a few days to prevent the bottom berries moulding.

The fruit will be ready to remove from the racks or trays in 12 to 21 days, according to weather conditions. Never take Currants from the rack until they are free from moisture. Grapes containing juice are liable to burst, and to coat the rest of the fruit in 'sugar, which makes stemming and grading operations difficult. The fruit is always more or less damp, as the Grape sugar is deliquescent, that is, absorbs moisture from the air. The sticky berries form lodging places for dust particles, which give the fruit a more or less uninviting appearance.



The fruit is shaken from the racks and trays on to hessians, where it is spread out in thin layers, and exposed to the sun to complete the drying process, this usually takes from one to three days, according to the temperature and to the amount of moisture in the berries. From the hessians the fruit is transferred to the sweat box, and should be sweated for about ten days. Never place hot fruit into the sweat box, as in a dense, more or less consolidated mass, the fruit is liable to "over-sweat" and become sticky. Box the fruit either in the late evening or in the morning.

#### SULTANAS.

THE SULTANA is ready for drying from the latter part of February till the middle of March, is usually passed through a liquid to facilitate the drying process. The two methods that are usually followed are termed "hot" and "cold" dipping. In the first instance, the fruit is passed through a hot solution of caustic soda, and in the latter case it is immersed in a cold emulsion of carbonate of potash and olive oil. The cold emulsion is sometimes made from freshly burnt ashes, but as time will not permit to go in full details in this article, the remarks will be curtailed to describe the hot caustic soda and the cold carbonate of potash and olive oil emulsion methods.

#### The Hot Caustic Dip.

The temperature, strength of the dip, and the length of immersion, all tend to influence the color of the dried Sultana. The old practice of a boiling dip, with about a two-second immersion, is giving way to a cooler dip of, say, 192 deg. to 198 deg. Fahr., with an immersion as rapid as is possible to pass the fruit through the liquid. The necessity for minute cracks to appear around the stem end to facilitate drying, is not looked for in the modified dipping method.

The strength of the dip will vary according to the texture of the skin of the berries; for tough skinned fruit, 1 lb. caustic soda in about 25 gallons of water will be found about right, while the water may be increased to 30, or even 40, gallons, should the fruit be of a pale greenish tinge and thin skinned.

Sultanas treated by this modified hot process take longer to dry than was the case with the boiling dip, but produce a finished article of a much brighter and attractive color.

From the dip the fruit is spread on the rack or trays as soon as possible, fruit left in the dip buckets for a considerable period is liable to go dark during the drying process. The racks or trays are usually left open to the sun, though it is preferable in very hot weather, if they are not roofed, to place the top cover on to break the direct rays of the sun from the top tier.

The fruit will remain on the racks for  
about a fortnight,

or even longer, should the weather turn cool. The fruit should never be shaken on to the hessians until practically dry. Taking the fruit from the racks too early does not only damage many of the berries, but the fruit is likely to darken considerably in color while on the hessians, especially if the nights turn cool and the fruit has to be rolled.

#### The Cold Dip Method.

The fruit treated by the cold dip takes longer to dry than by the old hot dip methods, but not longer than when treated by the modified hot dip. The vessels in which dipping was done during the past seasons were the ordinary dipping tin and tank, occasionally a specially made dip tank was used. There is some disadvantage in using galvanised iron vessels for the potash solutions, owing to the chemical action that takes place. In the near future, if the cold dip method becomes popular,

wooden tanks and wickerwork baskets may be substituted for the galvanised vessels.

The dipping mixture is made by adding carbonate of potash to the water until a Beaume reading of between 5½ to 6 degrees is obtained; this will require about 15 lbs. of carbonate of potash to 25 gallons of water. To the same quantity of water olive oil is added at the rate of half a pint. The emulsion is made by agitating the mixture freely. More oil will be required, when the emulsion is cold in the early morning than is required when the emulsion warms up as the day advances; that being the case, it will be found advantageous to slightly warm the emulsions on cold mornings.

The length of immersion does not appear to be a very vital point, the deciding factor being the complete covering of the berries with the emulsion.

The buckets containing the fruit are placed in the emulsion, and are allowed to remain in the liquid from two to four minutes, they being moved about occasionally to cause the emulsion to pass freely through the bunches. On removal, if the berries do not appear to be properly coated with emulsion, more oil should be added until the desired result is obtained.

The fruit is spread fairly thinly upon racks or trays, and for the first week should be lightly shaded from the direct rays of the sun. If exposed to the sun in the early stages of the drying process, the tops of the exposed berries take on a reddish brown tinge, and are apt to give the finished product a more or less mottled appearance. After the first week, when the fruits have wilted down, the curtains can be removed.

After dipping has been in progress for some little while the

#### density of the emulsion

will be found to have increased, this is due to the absorption of salts in the dust particles on the fruit, and the sugar and juices from damaged berries. Each half ton of fresh Grapes passed through the dip removes approximately three to four gallons of emulsion. The liquid in the dipping tank is kept up to the required level by adding potassium carbonate solution from time to time of the same density as that of the original emulsion. After the same quantity of fruit has passed through the tank, it will be found necessary to add more olive oil; this varies considerably, from ¼ to ½ pint of oil being required. The quantity must be gauged by the wetting power of the emulsion, in other words, if the berries are not being properly coated, more oil must be added.

#### Spraying the Fruit.

The necessity for this operation will depend upon weather conditions. If good weather holds, there is little necessity to spray, though one spraying may be advisable to aid the drying process. Should wet weather be experienced, the fruit should be sprayed. This operation may be satisfactorily carried out with a garden syringe or small spray pump. The fruit should be sprayed with a 5 or 6 Beaume solution of the potash salt, oil being used if the berries appear somewhat dry and harsh, but omitted if they are oily.

Should there be the necessity for spraying, the berries will be more or less coated with the carbonate of potash salt, and should be passed through a cleansing bath to remove this. The washing is usually carried out after the fruit is dried, the Raisins being again exposed to the sun for a few hours to remove the added moisture.

#### Removing the Fruit from the Racks and the Subsequent Treatment.

One of the most important factors in producing the golden Sultana is to guard against shaking the fruit off the rack too early. The Raisins should be nearly ready for the sweat box before they are taken from the racks. Beautiful colored fruit of 4-crown grade is easily re-

duced to 1-crown by rubbing off too early. Once the fruit is on the hessian, do not roll it up, should the nights prove dewy: throw another hessian over the spread out fruit.

When taken from the racks the "cold dipped" Sultana often retains a more or less greenish tinge, this will usually disappear when the fruit has been exposed to the sun for a day or two. Should the green tinge persist, spray the fruit with emulsion while on the hessians.

#### The Gordo and Malaga (Waltham Cross).

The process as recommended for the Sultana may be followed with these varieties, with the exception of the strength of the dips. In the case of the hot dip the caustic soda will be increased—1 lb. being used in each 18 to 20 gallons of water. The Beaume reading of the "cold dip" should be increased to about 8 to 9 degrees. It is questionable whether the modified hot dip or the cold dip will prove suitable to the last of the crop, owing to the slowness in drying, due to the fall in the temperature of the atmosphere and the shorter length of daylight.

\* \* \* \*

#### PRUNE DRYING.

THE PRUNE is usually passed through a hot caustic dip prior to placing it upon the drying tray. Experiments carried out with cold dips ranging from 7 to 9 degrees Beaume, with olive oil added at the rate of  $\frac{1}{4}$  pint to 25 gallons of carbonate of potash solution, gave excellent results. When the hot dip is used, the lye is made by adding 1 lb. caustic soda to each 25 to 35 gallons of water, according to the toughness of the skin of the Prunes. The dip is used

at boiling point,

and the fruit immersed until minute cracks are observed on the skin. Drying may be commenced in the sun, and completed in the stack, or should the weather be excessively hot, the drying may be carried out in the stack. Light coloured Prunes are usually sulphured after being dipped, sulphuring being necessary for about eight hours.

After the Prune is dried and has been sweated, it is passed through

a glossing bath,

If the fruit is somewhat dry it can be steamed with advantage for 10 to 15 minutes prior to glossing. The glossing bath may be made on the following formula:—

1 lb. glycerine,  $\frac{1}{2}$  lb. wattle gum, 25 gallons of water.

The bath is brought to boiling point, and the fruit is immersed for about  $\frac{1}{4}$  to  $\frac{1}{2}$  minute, and is then spread on wooden trays and exposed to the sun to dry off the added moisture.

\* \* \* \*

#### THE PEAR.

THE WILLIAMS PEAR is the one most favoured for drying; this is gathered when fully matured, though still green in color. The fruit is stored in well ventilated boxes, and placed in a cool shed to ripen. The Pear is cut in halves, from the stem end to the apex, when it is thoroughly ripe and placed on the drying trays with the cut surfaces uppermost. The fruit is heavily sulphured

until the whole of the flesh is spongy; the fruit is tested by lifting halves off the tray, and feeling the skin where the fruit has been resting. If the flesh beneath feels soft the fruit has been sufficiently sulphured; if hard lumps can be felt in the flesh the fruit should be re-sulphured. Sulphuring usually takes from 12 to 16 hours.

From the sulphur house the fruit is spread out to the sun for two or three days, it is then stacked, and drying is finished in the stack. Drying usually takes from three to four weeks to finish. This method gives the bright golden fruit, wholly shade dried Pears are a light canary yellow in color, while those exposed to the sun during the greater part of the drying period are more or less brown in color.

\* \* \* \*

#### THE FIG.

THE processing of the Fig is fully described in the South Australian Argicultural Department's Bulletin No. 186.

## A Great Pomologist.

### Prof. U. P. Hedrick Receives Highest Horticultural Award.

Referring to the article, entitled "The Great Need for New Varieties of Fruits," by Prof. Hedrick, which



Prof. U. P. Hedrick—A Leading Pomologist in U.S.A. and Author of many valuable Fruit Books.

1925 has been awarded to Professor Ulysses P. Hedrick, of U.S.A. In making this award, the committee was influenced by the fact that Professor Hedrick is considered to be the greatest authority on fruits and fruit growing in the United States, as well as the fact that he has done more than any other man to promote the development of new and improved varieties.

Perhaps the most conspicuous result of his work is seen in the series of new Apples which have been put out by the Geneva Experiment Station at Geneva, N.Y., where he is in direct charge of research work. These Apples have the McIntosh Red as one of their parents, and closely resemble the McIntosh in their characteristics, but come at different seasons, some earlier and some later than the type. Probably the Cortland, which is now in cultivation, is the best known of these new varieties.

Professor Hedrick would have very high standing in horticulture for his

writings alone, even if he had not achieved a still greater reputation as an investigator and hybridist. His books, "The Grapes of New York," "The Plums of New York," "The Cherries of New York," and "The Peaches of New York" are remarkable in their accuracy and completeness and for the great number of colored illustrations which they contain.

Professor Hedrick has also written several other books, including "The Manual of American Grape Growing," "The Cyclopaedia of Hardy Fruits," and a recently issued and very comprehensive book entitled "Systematic Pomology."

The award of the George Robert White Medal is considered to be the highest horticultural honor which can be given in America.

Last year it was given to M. Jules Pernet-Ducher, of France, for his work in producing new Roses.—"Horticulture."

appeared in our last issue, it is announced by the Massachusetts Horticultural Society that the George Robert White Medal of Honor for



## Fighting the Codlin Moth.

Trapping Tests in South Australia.

Apple Juice and Vinegar Solutions.

Preliminary Report from the Blackwood, S.A., Experimental Orchard.

**T**HAT there are useful possibilities ahead in the luring of Codlin Moths to destruction by baits containing vinegar and Apple juice is stated in the following interesting article just to hand from Mr. Rodney Fowler, Manager of the Government Orchard, Blackwood, South Australia.

In the November issue of the "Fruit World," Mr. Jas. H. Lang, of Harcourt, Victoria, in a very interesting paper on the "Need for Scientific Investigation in Australia of the Codlin Moth and Methods for its Control," draws attention to the question of trapping the moths on the lines suggested by Dr. Tillyard of New Zealand.

As Mr. Lang mentions the need for experiments with Apple juice and vinegar solutions, I thought it might interest your readers to know that we are carrying out some tests in a small way in this direction with fairly satisfactory results so far.

I might mention that some 20 odd years ago I, along with many other Apple growers in Australia—carried out tests with "Frenler" traps with very poor results, and when at one of our Agricultural Bureau meetings

some time ago this question of trapping moths was discussed I was rather of the opinion that it was hardly worth while, but nevertheless we set out to give it a trial and Messrs. Ashby and Son and G. W. Summers, both of this district, also decided to test it.

The solutions being tested as lures are Apple juice 50 per cent. solution, and vinegar (ordinary commercial), 25 per cent. solution—the Apple juice (supplied by Mr. Ashby), being simply the fermented juice of rotten Apples.

For the purpose of determining the sexes (a very important detail), records are being kept of the moths trapped in 8 ordinary 2lb. jam bottles, 4 filled with Apple solution and 4 with vinegar solution. These are in each instance hung in the middle portion of the tree, the bottles being placed here and there through the orchard, and in addition to this, records are being kept of the moths trapped in 39 tins (2lb. jam tins), 29 filled with Apple juice and 10 with vinegar solution. The following tables will give some idea of the results so far:—

In addition 26 light brown Apple moths were trapped in these tins mostly in Apple solution.

It will thus be seen from the figures that in approximately one month (the tests were started on 18/11/25), in these small numbers of trap tests over 800 codlin moths have been caught and apparently on an average 40 per cent. of them were females. We think, therefore, it can be inferred that it is worth while carrying on further trials as the trapping of moths may prove a valuable addition to the methods already employed in controlling Codlin moth, and that more particularly in the hands of orchardists who are prepared to give the necessary attention to cleaning out and recharging the traps at fairly frequent intervals.

To this Mr. Quinn (Government Horticultural Instructor), adds:—

That this method of trapping Codlin moths is not by any means a new one is shown by the following extract from a report supplied by me to the Journal of Agriculture of South Australia for November, 1897, page 358—28 years ago:—

"At the ordinary meeting of the Central Agricultural Bureau held on October 4th (1897), Mr. Krichauff (the Chairman) furnished particulars of glass traps used in Germany for the purpose of catching Codlin and other moths. These traps are half filled with syrup to which a little Apple pulp is added and on fermenting, the smell of the Apple attracts the moths which settle on the sticky mixture to lay their eggs and are destroyed. On inquiries being made, the Manager of the S.A. Glass Bottle Coy., was kind enough to present to the Bureau 6 doz. glasses which they had adapted to this purpose. These were distributed to a number of growers for experiment besides which Mr. Geo. Quinn, Inspector of Fruit, took a number for trial.

He placed a dozen of the glass traps in the orchard of Messrs. Rowell Bros., at Lockleys, and charged them with syrup made of treacle and water with a little stewed Apple pulp. The traps were fixed on the trees on Monday morning and by Thursday 43 Codlin moths were caught, besides a great many other moths, flies, and insects of all descriptions (particularly lace wing flies). Owing to their being cracked, several of the traps had leaked their contents very quickly and only a few were in a workable condition after the first day. By

### RESULTS OF TEST TO DETERMINE THE SEXES OF MOTHS TRAPPED.

| Apple Juice                                                                                    |                        |          | Vinegar Solution                 |              |                       |
|------------------------------------------------------------------------------------------------|------------------------|----------|----------------------------------|--------------|-----------------------|
| Date                                                                                           | 50 per cent. Solution. |          | Date                             | 25 per cent. |                       |
| Examined                                                                                       | Males                  | Females  | Examined                         | Males        | Females               |
| 27/11/25                                                                                       | 41                     | 41       | 27/11/25                         | 40           | 15                    |
| 4/12/25                                                                                        | 21                     | 16       | 4/12/25                          | 11           | 10                    |
| 11/12/25                                                                                       | 81                     | 52       | 11/12/25                         | 23           | 11                    |
| 15/12/25                                                                                       | 14                     | 8        | 15/12/25                         | 5            | 5                     |
|                                                                                                | <hr/>                  | <hr/>    |                                  | <hr/>        | <hr/>                 |
| Total                                                                                          | 157                    | 117      |                                  | 79           | 41                    |
| Apple Juice Solution.                                                                          |                        |          | Vinegar Solution.                |              |                       |
| Average moths per jar . . . 9.44                                                               |                        |          | Average moths per jar . . . 12   |              |                       |
| Average female moths per jar 4.03                                                              |                        |          | Average female moths per jar 4.1 |              |                       |
| Average male moths per jar . 5.41                                                              |                        |          | Average male moths per jar . 7.9 |              |                       |
| In addition to the above 20 light brown Apple moths were trapped in the Apple juice solutions. |                        |          |                                  |              |                       |
| In 36 tins placed, one in each Cleopatra Apple tree:—                                          |                        |          |                                  |              |                       |
| Date                                                                                           |                        |          | Date                             |              |                       |
| Examined                                                                                       | Apple Juice            | 26 tins. | Examined                         | 3 Tins Apple | Solution to 16 Trees. |
| 4/12/25                                                                                        | 78                     | 21       | 4/12/25                          | 47           | (23 in one tin).      |
| 9/12/25                                                                                        | 70                     | 42       | 9/12/25                          | 42           | (23 in one tin).      |
| 15/12/25                                                                                       | 69                     | 37       | 15/12/25                         | 16           |                       |
|                                                                                                | <hr/>                  | <hr/>    |                                  | <hr/>        |                       |
|                                                                                                | 217                    | 100      |                                  | 105          |                       |

the third day the syrup had nearly all dried up and consequently the traps required an addition of liquid.

The result proves that the Codlin moth can be trapped, but whether the pest was caught before the egg laying is uncertain, though Mr. Quinn extracted from the body of one moth nine eggs, which shows that at any rate all the eggs had not been deposited. According to different authorities the number of eggs laid by a female Codlin moth varies from thirty to eighty; just now the moths are beginning to hatch freely. The traps were hung in a scattered manner in Pear trees of different varieties comprising early, medium, and late sorts. In no instance was more than one trap put on a tree. In a trap placed in a Duchess (local South Australian name for the Williams or

## TRAPPING CODLIN MOTHS.

### Further Advances from Harcourt, Vic.

#### Mr. Lang States the Experiments are Well Worth Continuing.

Experiments in connection with the trapping of Codlin moths as outlined in the "Fruit World" of November, are still being carried out. A large number of moths have been caught, both in the 10 per cent. vinegar solution and fermented Apple juice; up to the present (19th December) there is nothing to choose between the two as regards results, states Mr. Jas. H. Lang, of Harcourt, Victoria.

The tins containing the lure were put out on the 17th October, just as the blossoms were falling from the majority of the Apple trees, and up to 10 and 12 moths were caught in a trap the first night. A cold snap delayed their activities and it was early in November when they again became active, during a hot spell at that time.

More or less Codlin moths have been caught all through, the number depending on the temperature.

In thirty tins I would estimate that upwards of 1,000 moths were caught. Numbers of the Light Brown Apple moth have also been attracted, as this pest is not active until the summer months, it is expected that more will be caught from now on. The lure seems to attract over a wide area as many more moths—especially Codlin—were caught in tins situated well apart (one to fifty trees), than where they were placed in every tree. Further experience is needed to find out the number per acre to obtain best results in an economical manner.

Several other varieties of insects have also been caught, the Bogong being particularly plentiful during October, also vinegar flies and a few Meadow Butterflies.

The beneficial insects trapped include two ladybirds and a few lacewings, both of which feed on Aphids and young scale.

It is too early yet to give definite information as to the effect of the freedom of the Apple crop from Codlin moth injury, but the results both from the numbers caught and the cleanness of the crop, indicate that the experiments are well worth continuing.

## South Australia.

Satisfaction is expressed by growers at the success of the operations of the Fruit Pool Board Society in handling surplus fruits beyond normal market requirements to enable growers to receive a fair price for the fruit marketed. In the past, it is the surplus which caused a glut, and brought prices down to an unpayable level.

Almond growers are recognising the necessity for organisation to secure a rightful price for their Almonds.

At the Marion Branch of the S.A. Fruitgrowers and Market Gardeners' Association (Mr. C. H. Ragless presiding) it was reported that the Almond market was firm, owing to the shortage of local crops. Prices were fixed at—Brandes, 11½d. per lb.; mixed and soft shells, 10½d. per lb.

It is hoped that all Almond growers will soon be organised and brought into line as regards prices.

## EXPORT OF PLUMS.

### 10,000 Trays from South Australia.

On February 20th the S.S. Largs Bay is due to leave Port Adelaide carrying in a special cool chamber 10,000 trays of Plums. Mr. G. A. W. Pope, manager of the Government Produce Department, states that the experience gained since 1922 should be valuable, and thus growers can confidently send their Plums forward to cater for the high class "luxury" trade as well as for the commercial trade.

The greatest success, states Mr. Pope, was achieved with the "President" as these realised 60/- per case, containing about threequarters of a bushel of fruit. Golden Drops, Grand Duke, Shipper, Kelsey, Giant, October Purple, Satsuma, Red Heart, Egg, Imperial, Climax, Diamond, sold from 30/- to 54/- a case, and many other varieties returned prices from 20/- to 29/- a case. The total charges and freight from the orchard to the London market, average about 10/- per case.

The codfish lays a million eggs

The little hen but one,

But the codfish doesn't cackle

When her little stunt is done.

We praise the artful hen,

The codfish we despise,

Which makes it plain to business men,

IT PAYS TO ADVERTISE!

## Edward Jacobs & Sons

Covent Garden Market  
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Bartlett Pear), tree nine Codlin moths were captured. To give the method a complete test it would be necessary, Mr. Quinn says, to hang several traps in each tree and observe throughout the fruit season, whether the caterpillars of the moth were lessening in number. On the whole, the experiment so far may be regarded as satisfactory. It is necessary in this dry climate to recharge the traps every second or third day and hang them in a shady part of the tree and on the side away from the prevailing winds."

### Success.

He has achieved success who has lived well, laughed often, and loved much; who has gained the respect of intelligent men and the love of little children; who has filled his niche and accomplished his task—who has left the world better than he found it; who has never lacked appreciation of earth's beauty or failed to express it; who has always looked for the best in others, and given the best he had; whose life was an inspiration, whose memory a benediction.—Stanley.



# Picking, Grading and Packing Apples and Pears

(By N. D. Wivell, Sidmouth, W. Tamar, N. Tasmania.)

IN regard to the handling of Apples and Pears from the tree to the case, I wish to say I am only stating my own views of the subject, after 16 years' experience; commencing with Mrs. Wivell and myself visiting Mr. Sampson, the American expert packer, at Exeter, who was appointed by the Government to demonstrate the diagonal style of packing.

As the picking and packing operations are so closely allied to the successful marketing of fruit, to commence I will say a few words on picking.

## Picking Bags.

These are very useful, where the crop is light or scattered, but where trees are older and bearing well, as far as possible pick direct into the carrying cases; where children are employed to pick my experience is that if the picking bag is used, it comes too far down against the knees, and consequently the contents are not improved with the necessary movement of the limbs in getting about. To sum up, I prefer pickers who can handle a case,—generally speaking, from 16 years of age upwards.

Pickers should be instructed how to remove the fruit from trees, with as little damage to the buds as possible, as all buds broken off mean so much less fruit for the following season. Always pick with an upward motion and slight turn of the hand.

Do not fill the carrying cases too full, as most likely they have to be stacked, which entails double work removing the top layers. All fruit should be picked 24 hours before packing, which allows for sweating, the skins hardening, and fruit not being so subject to bruising when being graded and packed.

## Time for Picking.

This is a most important matter. Many of the growers have been taking their fruit off too early, with the idea of catching (not the early worm) but the early boat. Where is the benefit if the fruit arrives in an immature state? This specially refers to Cox's Orange Pippin.

A fairly accurate time to pick is when the pips are commencing to turn brown, although in the case of green Apples, such as Cleos., Dunn's, Five Crown, and Granny Smith, you can use your own judgment, according to the size of the fruit, and if the pips are fully swelled, you need not wait for the browning stage—allowing for the carting in having been done carefully, as a clumsy carter can account for a lot of unnecessary bruising.

We now come to the

## Sizing and Grading,

which is either done by hand or machine, and consists of sorting the fruit into the different sizes, ranging from 2 inches to 3 inches and over, at the same time discarding any that are blemished, and not up to the required standard, leaving as little of this work as possible for the packer.

## Packing.

The principal operation to ensure a profitable return in either the overseas or home markets, is correct packing (allowing that the fruit is good).

Taking the American diagonal style as the standard method of packing, I will first of all state the different packs in use under this system, viz., what are called the 2-1, 2-2, and 2-3 packs.

All 2-1 packs have 5 layers deep.

All 2-2 packs have 6 layers deep.

All 2-3 packs have 7 layers deep.

All Apples larger than the small 3-inch are packed under the 2 and 1 pack.

The following sizes are packed on the 2-2 count, six layers to the case:—

Small 3-inch, 108 Apples 5/4 alternate rows.

Large 2½, 120 Apples 5/5 alternate rows.

Medium 2½, 132 Apples 6/5 alternate rows.

Small 2½, 144 Apples 6/6 alternate rows, (often packed as 2½).

Large 2½, 156 Apples 6/7 alternate rows.

I do not recommend 7/7 in 2 and 2 pack.

\* \* \* \*

Under the 2-3 pack are included (7 layers to the case)—

Medium 2½, 175 Apples 5/5 alternate rows,

and also fruit from this size to 2 inches.

Occasionally small Apples will go 8 layers, but these are not recommended for shipment. There are

## two styles of packing

in vogue.

(1) The so-called "Apple grab," which consists of picking up the paper first, then the Apple with the same hand, and thus transferring it to its position in the case. This style was severely condemned by the late Mr. Rowlands, and personally I do not countenance it.

(2) The correct method is to take the Apple or Pear in one hand and pick up the paper with the other, then place the eye of the Apple in the centre of the paper, which allows the "screw" to come around the stalk, thus protecting others that it comes in contact with from bruising.

Now, as regards special packing for show purposes, every Apple or Pear must be placed in a certain position, but for commercial packing, where you put up from 60 to 80 cases per day, this is not practicable, the main feature being to pack them evenly and firmly in the case—as a rule making the eyes of the Apples fit in closely in the spaces between the previous Apples packed.

\* \* \* \*

DURING the whole process of packing, the fruit should be packed firmly, and constantly pulled up towards the packer to keep them firm. Of course, I am reckoning on the operator packing from the end of the case, with the further end slightly raised to give more command and ease in packing; in this, either fixed packing stands or trolleys can be used. For preference, the latter, with ball castors, and higher at one end than the other.

The box for the wrapping paper (which has the front open) hangs on the left side of the case. And a simple way of aiding the packer in picking up the paper is to have a small piece of cotton waste or sponge tacked on the corner of the box, which damped in the morning, will last pretty well through the day. This is much preferable to having to wet the fingers from the lips.

When packed, no case should be more than ¼ inch above the level of the top, then by the "nailer-down" placing his hands firmly on the top and gently pressing down before putting on the woodwool, the Apples will go nicely into place without fear of bruising when putting on the

lid. Granted that the fruit has been put up in the correct pack, it should stand a fair amount of handling, and should carry to its destination without bruising.

Two of the chief causes of fruit deteriorating in transit are—

- (1) Slack packing, and
- (2) Packing too high.

Too much emphasis cannot be laid against the practice of bumping down the cases, first one end and then the other, to get the lids on; the effect of this practice you can imagine, as every Apple twists and turns in the process of squeezing down in the case, which cannot help but injure the fruit.

It takes very little time for an experienced packer to know exactly what pack to use, so as to fill his case firmly, without getting it too high.

#### Woodwool.

Use a fair amount of this for top and bottom, but don't overdo it.

#### Strawboards.

These are not recommended for overseas shipments, but are optional for Sydney or Melbourne.

No fruit should be shipped to England unless wrapped.

\* \* \* \*

#### PEARS.

**P**EARS ARE PACKED under the same system, but different in the way of placing in the case or half case. To start with, you place the eye or butt of the Pear against the end of the case, and then fill in

your rows the opposite way, making each stalk end dovetail into the spaces of the previous row, finishing up the layer the same way. This refers more to the elongated Pears than such as Williams and other round varieties.

#### Branding.

As regards branding, I understand that the same matter should appear on each end, although not compulsory, viz., shippers' name or brand, then the number of the agent to whom being sent, then comes the grade, description of the fruit and size. Full name of sender being on lid, also the word "Australia."

As regards preparing the cases for the packer, this is generally done by a junior, such as stencelling and placing woodwool at the bottom of the case, the nailer-down taking the case from the packer, at the same time placing another case in position. By using four packing stands, two packers can be accommodated without loss of time.

#### Graders or Sizers.

There are several of these on the market, and after three seasons' experience, I claim the "Lightning" Grader has turned out the best work in my sheds, although two other makes are in use. There is no drop, and the fruit passes from the picking case into the hopper, and thence under the rubber roller into the packing bin with only two handlings from tree to case.

[A paper read by Mr. N. D. Wivell, of Sidmouth, Tasmania, at a meeting of fruitgrowers held under the auspices of the Tamar Farmers' and Fruitgrowers' Association, October 30th, 1925.]

## Apple Packing

### Who is Australia's Fastest Packer ?

Western Australia Awards the Palm to Mr. Basil Krone, now Packing Instructor in the Victorian Agricultural Department.

170 Cases in a Day.

**O**N the subject of Apple packing, a Western Australian grower passes a bouquet to an officer in the Horticultural Division of the Victorian Department of Agriculture. Mr. W. R. Davern, of Lowden, W.A., writes:—

The following may be of interest to "Fruit World" readers:—

During the two years he was employed as orchard manager and packer at "Louden," the property of Mr. J. T. Davern, Lowden, W.A., Mr. Basil Krone, the present fruit packing instructor of the Victorian Agricultural Department, on numerous occasions packed over 100 cases of Apples in a day.

His best tally, however, was made one day in April, 1916, when he wrapped and packed 170 dump cases of Nickajack Apples. The fruit was very clean, and had been put through the grader, and the day was one of 9½ hours. 100 cases were packed in

the morning run of five hours—7 a.m. 12 noon—and 70 from 1 p.m. to 5.30 p.m. The tally was made up as follows:—3in., 60; 2½in., 71; 2in., 38; 2in., 1.

Two other growers in this district, as well as Mr. J. T. Davern, his wife and myself, were present when this huge total was made, and they can vouch for the accuracy of this tally, which surely is a record.

The Victorian Agricultural Department was fortunate in securing the services of such an experienced man as Mr. Krone, who, besides being an expert packer and case-maker, has also a thorough knowledge of orchard work and shed management.

[On Nov. 22, 1922, Mr. Ray Moore packed 300 bushels of Oranges at the Mangrove Mountain Citrus Packing House, in 8 hours 58 minutes, and his claim for the championship in packing has not to our knowledge been challenged.—Ed. "F.W."]

#### FRUIT AND HEALTH.

Children Should Eat Fresh and Dried Fruits, not Sweets, says a Leading Doctor.

"Three meals a day are sufficient," said Mr. J. Polack, when lecturing upon "Dental Disease," with particular reference to the food factor in the decay of teeth, at the recent Health Conference in Melbourne. "There is an inordinate desire, especially by young people, for the wrong kind of food between meals. The enormous consumption of chocolates and biscuits at odd times during the day is ravaging the mouths of the people of this country. The 'tuck shop' near schools encourages children to eat food which is absolutely useless to them, in addition to being distinctly harmful. If fresh and dried fruits were sold instead of sweets, children would not only benefit themselves, but would be helping to foster a deserving industry. The use of the tooth-brush is, unfortunately, necessary on account of the state in which our food is served up to us."

Apple growers in Wenatchee district of Washington are turning to poultry heavier each year.



## Fruit Canning.

The Shepparton (Vic.) factory is now a huge affair. The recently erected cool store is capable of holding 40,000 cases of fruit.

Following the Apricots, Tuscan Cling Peaches were processed, followed by Williams (Bartlett) Pears; then there will follow mid-season Peaches (Phillips', Goodman's Choice, etc.), and Pullar's Cling Peaches.

Growers' committees are continuing their efforts to secure a bounty for the coming season, in the know-

they prefer more of the mid-season varieties. It is suggested that an inducement be offered in the way of enhanced prices for these mid-season choice varieties.

Canned fruit packs in the Goulburn Valley are estimated, in round figures, at 650,000 cases—about 14,000,000 tins. Apricots are light, Peaches and Pears plentiful, quality first rate.

The new factory at the Mooropna Railway Station will handle the fruit from Ardmona: about 3,500 tons will be processed. The Y.W.C.A. is conducting a hostel for the girl workers. The plant is of Heine (Australian) make.

The Executive consists of:—Chairman, Mr. V. R. McNab; Directors, Messrs. J. C. Turnbull, H. E. Pickworth, R. B. McLennan, E. L. Young; General Manager, Mr. A. J. Williams; Factory Manager, Mr. A. Cameron.

At a recent impartial "tin opening" ceremony, when unlabelled cans of fruit were inspected by experts, Australian and Californian samples were tested, and, grade for grade, the Australian fruit was superior in every instance.

### CANNED FRUIT.

Shipment to London.

The "calamity howlers" had a big time during January. Glaring headlines appeared in the public press, regarding a claim which, it is understood, Messrs. Weddel and Co. intend to make regarding a portion of their big purchase of 142,000 cases of canned Peaches, Pears and Apricots. After the case had been thoroughly prejudged, and the "news" broadcast that the Australian canned fruit was unreliable, the Prime Minister (Mr. Bruce) announced that of the total export of 414,000 cases last season, three per cent. was deemed to be unsatisfactory, viz., 5,127 cases of canned Apricots, which were included in the shipment to Messrs. Weddel and Co.

To be fair to Messrs. Weddel's, it must be stated they did not desire the publicity in this matter. They decided they had a legitimate claim, and made it, as other firms do, in connection with the lines they handle. It happens every day in business. Why the shrieking headlines in newspapers?

If the claim were proved, the firm concerned would learn its lesson, and the regulations could be tightened whenever and wherever necessary. But

this can be done without crying "stinking fish."

Before there was any time for enquiry, or any official pronouncement, Mr. Frank Clarke, M.L.C., wrote a letter to the Melbourne "Argus," which was published throughout Australia, and doubtless throughout the world, condemning the pack of proprietary canneries, and suggested collusion by Government officials in the passing of inferior canned fruit.

An official enquiry has been asked for by the persons aggrieved by it. Mr. Clarke will probably hear more of the results of his precipitate action.

## MARGETSON & CO. LTD.

### Fruit Importers & Salesmen

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St. Warehouses,

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COVENT GARDEN  
LONDON, W.C.

and at  
Jamaica House,

9 & 10 Botolph Lane, London, E.C.  
& 56-58 Stanley St., Liverpool

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Prompt Returns & Settlements  
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MARGETSON, LIVERPOOL

Head Office—Covent Garden  
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Law Courts Branch, Strand,  
London, W.C.

Shipping Nos.

431 and 432

ledge that on this bounty the success of the export trade depends.

The average price for canning Peaches, Pears and Apricots is £10 per ton, though growers in the Shepparton area received an additional 30/- per ton at the close of the successful season in 1925.

Reports to hand from nurserymen indicate that the demand is still insistent for Pullar's Cling Peaches, whereas it is understood that canning factories are already overtaxed in dealing with this variety, and that

## R. JOEL & SONS

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Covent Garden Market  
LONDON, W.C.2

Open for  
Consignments of  
all Australian,  
Tasmanian and  
New Zealand  
Fruits

### SALES BY PRIVATE TREATY ONLY.

WHICH GIVES THE BEST RESULTS

#### PROMPT RETURNS AND SETTLEMENTS.

Cash advanced to cover freight  
and overcharges, etc.

Cablegrams:

#### AINSJOLFRU-RAND-LONDON.

Agents Wanted in—  
MELBOURNE, HOBART, NEW  
ZEALAND and WESTERN AUS-  
TRALIA.

BANKERS:

National Provincial Bank Ltd.,  
Long Acre, London. Barclay's  
Bank, Henrietta Street, Covent  
Garden.

### THE PORT OF LIVERPOOL.

We acknowledge having received from the Mersey Docks and Harbour Board their statement of accounts for the year ending 1st July, 1925. The records show the ships and tonnages arriving at Liverpool from 1752 to the present time. In 1925 a tonnage of vessels of 19,635,125 was dealt with, this being more than 1,000,000 tons above the previous year's record. The revenue, which totalled £2,793,665, was £83,000 more than for the previous term.

# New Zealand.

Export Problems—The Season Reviewed.

Work for the Month Feb. 20—Mar. 20.

(By Avro.)

**T**HE SPRAYING season is now gradually drawing to a close, although in the warmer districts in the North Island it will still be necessary to keep a close watch for the codlin moth.

Woolly aphid is another disease for which spraying may be found necessary in many instances during the month. In certain districts the aphelinus mali parasite has become so well established that spraying is no longer necessary, but where such is not the case, spraying should be carried out.

It is now too late to remedy the damage done by the Pear slug, but as this will now be very apparent, the present is an opportune time to draw attention to the destruction which it effects. Damage of this nature invariably affects not only the growth of the tree, but also the quality and size of the fruit it bears.

Cultivation should be continued so that any moisture may be conserved. Summer cultivation will often supply the moisture which is so necessary to maturing fruit.

## In The Garden.

Lettuce may still be planted, and Silver Beet can be transplanted. Radishes and Turnips may also be sown at any time. In the warmer parts of the North Island, Spinach may be sown for a few weeks yet, but in the south it should be up by now. Spinach, which is seldom attacked by pests, is one of the most valuable of all winter vegetables, and wherever possible it should be sown.

Turnips for winter use should in most places be sown about the middle of March. In the South Island it will be necessary to plant a little earlier than this, possibly during the first week in March, while in the North they can be planted right up to the end of the month.

## APPLE EXPORT.

### Views of Mr. Attwood.

Mr. T. W. Attwood, ex-president of the New Zealand Fruitgrowers Federation, who recently returned from England, where he supervised the 1925 export from the Dominion, is impressed with the immense scope of the English market. Fruitgrowers

however, should not over-estimate the importance of New Zealand from the standpoint of the British buyers. In 1925 the Dominion sent 250,000 cases, but Australia sent over 2,000,000, while much larger quantities were sent by Canada and U.S.A.

The export standards of New Zealand were the highest in the world. In appearance there was nothing superior to the American Apples, but on quality the N.Z. fruit was infinitely superior because of its longer period of maturity.

The greatest disability from which New Zealand growers suffered was the flooding of the market with American Apples.

### Future of Export.

Mr. Attwood expressed himself as being entirely optimistic regarding the future of the Apple industry in the Dominion, and said that although there was now no market left in New Zealand itself, England could absorb all the Apples which New Zealand could produce for many years to come. He had been working in the industry for sixteen years and was convinced that it was sound, and that growers could look forward to a period of prosperity assured of a market for their high quality fruit.

## POVERTY BAY'S EXPORT.

### Assistance from Department.

#### 4,000 Cases Expected.

During the present season several new districts are entering the export field, including Poverty Bay, which intends to export 4,000 cases of Apples this season. Next year it is expected that a considerably larger quantity will be exported.

The Director of Horticulture, Mr. J. A. Campbell, and the Secretary of the Fruitgrowers' Federation and the Fruit Export Control Board, Mr. H. E. Napier, recently visited Gisborne and promised the growers every possible assistance.

### Control Board.

Mr. Campbell reviewed the operations of the Fruit Export Control Board, which he said aimed at obtaining a sound knowledge of the fruit trade, and was making no drastic changes unless it felt certain that

they would be beneficial to the growers. It was anticipated that New Zealand would send away 400,000 cases this season. The Government had renewed the guarantee for any quantity up to 350,000 cases. Auckland aimed at exporting 40,000 to 50,000 cases this season, and Hawke's Bay reckoned on sending away 75,000 cases. The idea of the Government in giving the guarantee was to allow exporters to learn their business without loss.

### Federation's Aid.

Mr. H. E. Napier said that the Federation and the Fruit Control Board though two separate bodies, were working hand in hand for the benefit of the industry.

While not suggesting that Poverty Bay growers should send the whole of their shipments direct to Colonel Gray in England, he thought that some of the fruit should be so sent, in order that Colonel Gray could place it on the market in some of the provincial towns.

Interviewed recently Mr. Campbell said that the matter of inspection was most important. Last season arrangements had been made to load the fruit into Home steamers from lighters at Nelson, and the matter of inspection had then been simple. This season the fruit would be brought to Wellington, and it would be necessary for the Harbor Boards at Nelson, Mapua and Motueka to provide shed accommodation to allow the fruit to be stored pending shipment. At present there was not sufficient accommodation at any of these ports, and this would have to be provided at the earliest possible moment. The fruit would be assembled and inspected at the port of shipment.

## AROUND THE DOMINION.

### Notes from Here and There.

The necessity for research in connection with the growing of citrus fruits was mentioned recently at a meeting of citrus growers at Tauranga, when it was pointed out that only fruit of the very best quality should be grown. The necessity of a frost survey of various districts was also mentioned, it being pointed out that citrus fruits would then only be planted in localities which were comparatively free from frosts. A motion was carried urging upon the N.Z. Fruitgrowers Federation the urgent necessity for regular research work in the fruitgrowing industry, and of ways and means for furthering that research work. The Government will be asked to lend assistance to the project.



The Hawke's Bay Fruitgrowers' Association which has grown rapidly during recent years has now erected a large and up-to-date building close to the railway station at Hastings. A few years ago the business of the Association was conducted in a room in a private house. The business grew and the Association purchased an old house. Once again the passing of time has shown the necessity for further improvement, and the house which for some years did useful service to the growers has now given

### Fruit Shipments LONDON

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Established 1863.

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Tasmanian, and American  
APPLES.

Foreign Apples a Speciality.

way to a substantial building erected on the same site. Ample accommodation is made for the storage of sprays, etc., handled by the Association, while a board room has also been included. The funds for the erection of the building were obtained by means of the issue of debentures to members.

The Institute of Horticulture continues to make good progress, and has now taken up several matters which will greatly benefit fruit-

growers and nurserymen generally. Of these the most important is that relating to bud selection. The Government has promised a grant of £150 towards the funds, but a much larger sum than this will have to be raised if the Institute is to continue to progress along the right lines.

The extraordinary advance which had been made in fruitgrowing in Hawke's Bay was the subject of comment by Mr. J. A. Campbell, Director of the Horticultural Division of the Department of Agriculture, during a recent visit. Orchards which he had assisted in planting years ago were now in full bearing, and the whole of the orchards showed signs of bearing excellent crops.

The question of the control of fruit sold on the local markets was the subject of brief comment by Mr. T. C. Brash, president of the N.Z. Fruitgrowers' Federation during the course of an address to growers in the Hawke's Bay district. Mr. Brash said that a move was being made in that direction but it was done, not to take the fruit from the control of the grower, but for the purpose of standardisation. One of the greatest difficulties which they had had to face was that of inferior fruit, and they believed that local control would overcome this.

Now that the Fruit Control Board is in operation certain growers have contended that the Fruitgrowers' Federation was unnecessary. That such is not the case was the contention put forward by the president recently. Mr. Brash said that in the matter of supplies the Federation was doing valuable work, and there were many detail matters which they could handle that were outside the scope of the Control Board. He was certain that if the Federation were to be scrapped some other organisation would have to be formed to take its place.

#### Cider Making in New Zealand.

The manufacture of cider is steadily extending (states the New Zealand "Journal of Agriculture") especially in the Nelson district, where a large quantity of low-grade Apples, which would otherwise be unsaleable, is utilised for making this beverage. The quantity of cider made during the year 1924-25 is estimated at 45,000 gallons, valued at £11,250.

### DEHYDRATED FRUIT AND VEGETABLES

We have received from the Clyde Engineering Company Limited, Granville, Sydney, through the courtesy of Mr. George Wood, Secretary to the Company, some very fine samples of dehydrated fruits and vegetables, which were recently treated at their works by the "Simplex" Drier, which is a valuable machine for dehydrating fruits and vegetables of all kinds.

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Melbourne, and Surrey Chambers,  
Perth, W.A.

Victorian Agent: H. M. Wade &  
Co., 471 Flinders Lane, Melb.

Here are a few of the samples received from the Company—Bananas, Prunes, Apples, desiccated Coconut, Sweet Potato flour, Green Peas, Soup Onions, Mint, and Parsley. In the company's announcement on page

will be found illustrated the "Simplex" Drier No. 1, and "Simplex" Drier No. 2 machine. This is a process of treating all kinds of fruits and vegetables by dehydration, which should appeal largely to those interested.

## Export to Great Britain.

Interesting Observations and Comments.  
Australian and American Methods Compared.  
Citrus Export Advocated.

**C**O-OPERATION amongst fruit-growers is a vital and necessary factor in the fruit industry. American organisations have proved this. It makes for orderly and economical marketing. Such co-operation should be based on proved successful lines, to avoid failure and loss. Co-operation should be voluntary, and the growers' organisations should work in harmony with the wholesale and retail distributors.

This is the considered opinion of Mr. Montague C. Mascart, who spent over 20 years in America. This experience at first was in fruitgrowing

ing the same fundamental principles of success, with, of course, local adaptation of details to suit local conditions. Harmony and co-operation between the growers' organisation and the wholesale and retail distributors are deemed to be vital.

The Australian Navel Orange is much appreciated in the old country: color, juiciness and flavor are all that could be desired.

The trip takes 28-30 days through the Panama from Los Angeles to Liverpool, a distance of 8,000 miles.

If the phases of handling Australian citrus export were adhered to, it is unquestionable that the citrus would carry successfully from Australia to England.

They have had success with both ventilated and still air chambers from California, but from Australia it would appear to be more advantageous to use the ventilated system.

Shipments of Oranges range from 1,500 to 20,000 boxes in single ship's chambers.

Australia has par excellent citrus fruit, and it is very popular in England. It is wanted in quantity. There is always room for Australia's fruit, in addition to South African shipments, as it comes in at a later season.

Regarding the Apple trade of such States as Washington and Oregon, and the province of British Columbia—the associations which handle fruit are composed of acreage represented by growers; they deliver their fruit to the Association, and it is all pooled and packed under standard grades. The marketing is left entirely in the hands of the manager, who either negotiates the fruit on an f.o.b. basis or consigns to the Association's agents in different parts of the States. In larger associations the growers are not only represented by the packing association, but the packing association is a member of the distributing and selling organisation. Their duties are on a similar basis, and the entire disposal of the fruit is left to the selling and distributing organisation, which operates for the interest of the association on a cost-price basis.

The associations are members of the selling-distributing organisation. This medium has been in vogue for

some time, and is entirely successful, by the well-known organisations, namely, the California Fruit Growers' Exchange, Mutual Orange Distributors, and the Hood River Apple Association, and several others which constitute a great part of the fruit industry of the world.

### The Simons Organisation.

The Simons' organisation found that a more expedited and more reasonable cost of handling fruit was requisite to serve the south of England, and four years ago they opened warehouses at Southampton dock. At the time it was deemed to be an "experiment" in the minds of many of the older establishments of the London markets, but owing to the deep-water facilities, and excellent train services from that port and its approximation to the vast populated districts to the south, it has proved very beneficial and remunerative both to the exporters of fruit to the United Kingdom and the buying trade generally.

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Solicit Consignments of

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Best market prices and prompt  
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Correspondence invited.

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410 Flinders Lane, Melbourne

MURDOCH BROS., Hobart

in the Western States of U.S.A., which experience he now finds eminently useful in the brokerage business of the United Kingdom in the Simons organisation of Southampton, Liverpool, and Glasgow. Mr. Mascart took part in some of the initial shipments of fruit from the North-West of America, via the Panama Canal. Apple shipments to the U.K. by Panama Canal now exceed 1,700,000 boxes.

Mr. Mascart speaks in terms of highest praise of the organisation of Apple, Citrus and other fruitgrowers in U.S.A. The co-operative citrus growers' organisations—the California Fruit Growers' Exchange and the Mutual Orange Distributors—are performing very fine service for the growers, and the hope was expressed that Australian organisations would organise along similar lines, adopt-

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Prompt Advices of Sales  
—CHEQUES WEEKLY—

**471 FLINDERS LANE  
MELBOURNE**  
And WESTERN MARKET.

During last year initial cargoes of Australian fruits have been delivered to Southampton with remarkable success. The returns made have been circulated, and speak for themselves of the meaning and real value of that new outlet. On the occasion of the initial sale of Australian Apples at Southampton, buyers came from as far north of the British Isles as Perthshire, where they received delivery of their fruit from Southampton after the sale in the course of 24 hours.

In Liverpool the tonnage of American Apples handled by the Simons organisation is very large. More American Apples go to Liverpool than London. In Liverpool all business is by brokerage, not private treaty. The popularity of the auction system of distribution in the United Kingdom can be based on the



fact that over 90 per cent. of North American importations are handled by that method.

Glasgow is a market that has not yet been patronised by direct shipments from Australia, and Messrs. Simons hope to serve this port by direct shipments this coming season. The peculiarities of the north of England are such that larger sized fruit may be more advantageously disposed of there than in the south part.

Mr. Mascart is glad to find here the associated efforts between the fruit-growers, agents, and shipping people, but there is a big scope for mutual conferences to bring about further improvements.

#### AUSTRALASIAN FRUIT EXPORTS.

##### The Value of Shipping Numbers. Should be Completely Adopted.

The advantage of shipping fruit under registered numbers is stressed in a letter to hand from Mr. H. W. Goodall, Secretary to the National Fruit Trade Federation of London.—The letter is as follows:—

To the Editor "Fruit World."

Sir.—The system of consigning Australasian Fruit under registered shipping numbers came under review at a conference of importers held at these offices on November 2nd, and the view was generally expressed that the system had proved of very great assistance in securing a quicker and more accurate delivery.

It was however reported that the numbering system is not being universally adopted, and the fact that some consignments are still being shipped under marks is causing a certain amount of delay and confusion in unloading.

In the interests of all concerned it is important that every effort should be made to secure the universal adoption of the numbering system, and I am instructed by the Conference to ask that you will impress this upon your senders.

The cases without numbers are certainly liable to delay in clearance, as they cannot be allocated to the proper piles until the whole cargo has been unloaded and the presence of such cases must to some extent delay the discharge of the whole cargo, including the numbered cases.

The numbering system has been evolved to assist everybody concerned—growers, shippers, importers, shipping companies and dock authorities. Its value has been proved and I shall be glad if you will very strongly impress upon your friends in Australasia that your Shipping Number should be given on every case and every Bill of Lading.



Mr. J. M. Ward

ed the subject of wireless talks by the Superintendent of Horticulture in Victoria (Mr. J. M. Ward). The following is one of these recent chats by Mr. Ward:—

**I**N THE course of my previous broadcast talks I made reference to a few of the problems that confront the growers, but were I asked to name the

##### greatest of all problems

of orchardists, I would, without hesitation, say "Marketing of the Fruit."

All who have had anything to do with the selling of fruit will agree that this is a more intricate business than the marketing of any other agricultural product. The reason for this is probably due to the fact that fruit-growing is more or less a small producer's business, and each orchardist is, to a very large extent, an individualist. Probably more so, than any other producer, or set of producers. This fact accounts for the fruitgrower becoming both a producer and a salesman. He may make a success of one, but often fails badly in the other.

There are few, if any, growers in Australia who can honestly say that our marketing methods are satisfactory. Surely there must be some reason for this state of dissatisfaction! Is it lack of intelligence on the part of the grower? Or is it due to the system of fruit selling adopted throughout Australia? Personally I consider it the latter. Once we establish a system or custom we find it very hard to break.

Unless the fruitgrower will give up the idea of being both a producer and a salesman, we will not make any material advancement in our marketing methods. By referring to the grower as being both a producer and a salesman, the remark refers to him as growing and packing the fruit and then sending it on to some man or set of men to sell it for him at whatever price can be obtained. In other words each grower exercises his individual judgment (which is not based upon first hand knowledge of marketing conditions), in sending his fruit to this or that fruit commission agent, whom he often knows only by name.

## Fruit Marketing and Organisation

Lecture Broadcast by J. M. Ward,  
Superintendent of Horticulture, Victoria.

The fruit industry and various matters relative thereto, form-

No blame is attached to either the grower or the agent for this state of affairs, but deep-thinking people will agree that our system in selling fresh fruit is altogether wrong. Growers sending fruit on consignment to Sydney or Brisbane

##### receive numerous wires

informing them that the market price for certain fruits is such and such a price. Who makes the market price? Why, the weakest commission agent in the market, of course! No agent can honestly state otherwise! It is not always a case of supply and demand.

When fruit is sold at a cheap rate in the market, the consuming public does not get it cheaply. No matter at what price the fruit is sold, the grower still has his standard expenditure to meet. He knows he has to pay certain prices for his implements, his spraying materials, manures, horse-feed, case-timber and numerous other requisites. Prices for these are stabilised. They are certainly not fixed by the purchaser, i.e. the grower. Oh no; this would never do! To allow the

##### producer to fix prices

for his orchard requisites would be a most unbusiness-like attitude for the manufacturer to adopt. Yet the same producer—the grower—allows the purchaser of his goods to say what price he—the producer—must accept.

Now, I ask you: Is this a fair thing? Is it the correct thing? Is it wise? If the grower agrees that it is right; well and good; continue as we are going! The speaker knows from his intimate relations with Australian growers that they are not satisfied with the present conditions and that some improvement is absolutely necessary.

##### Growers should Organise.

How are we to bring about that improvement? It can only be done by growers becoming organised. When this is done we will be able to bring about organised marketing and thus stabilise prices, so that the consumers can purchase fruit at a reasonable price, and yet at a price that will return the grower fair profits. Growers and fruit agents should be brought closer together both collectively and individually.

The first steps in successful marketing are good grading and packing. To bring this about our growers must standardise their grades and packs.

As individuals, they find it hard to effect any material improvement; collectively, however, great things can be accomplished.

Agents in the Western Markets, Melbourne, and in Sydney and Brisbane markets have no desire to handle low grade fruit. It is hard to sell, and is unsatisfactory to themselves and to their clients, but owing to our adopted system of selling fruit, agents are somewhat reluctant to tell their clients the real truth for fear of losing their custom.

#### Co-operative Marketing.

We could, with much benefit to ourselves, take lessons from American and Canadian fruitgrowers in regard to co-operative marketing. To do this we must drop our individualism, and get the spirit of co-operation in us. We lack neither ability nor initiative, still the co-operative spirit appears to be missing. In the U.S.A. there are in existence some 14,000 producers' buying and selling associations, and this shows very clearly that American farmers and fruit-growers appreciate the value of organised effort in effecting savings and improving service in the marketing of their products.

Co-operative marketing organisations can assist in standardisation, improving grades and packing, obtaining and using market information, developing old markets, finding new markets, effecting savings, improving service, advertising and buying supplies for growers.

Success in co-operative marketing depends upon obtaining a sufficient volume of business, observing co-operative principles, employing capable management, following up-to-date business methods and having loyal members.

There is, or should be, a difference between a co-operative company and a proprietary company. The latter is operated for profit, and distributes profits as dividends on the capital invested, whereas the co-operative company is operated to effect savings and improvements, and restricts return on invested capital to a fair rate of interest. It is well known that certain producers' co-operative companies have been operating and failed in all the States. Because of these failures there is no reason to assume that the existence of co-operative organisations is not justified. They are not only justified, but are very necessary in the interests of producers. Almost every day certain proprietary companies or private firms fail, yet other private concerns still carry on successfully.

The co-operative organisations have, and always will have, enemies, both inside as well as outside the movement. The principle of co-operation is a just one, and every grower should help to build up and support a strong organisation in his district. It can be done in each district by the getting together of a few leading men who would arouse interest by holding meetings, and get every grower interested in an organisation before its formation is undertaken, discuss the proposition thoroughly, and select a committee to canvass the district for support. It would be unwise, however, to claim impossible results for the venture. Having aroused

#### sufficient interest among growers

to form a company, it would be necessary to then draw up the required by-laws. These should be drafted very carefully to suit local conditions, have them discussed fully, section by section, and adopt them by a membership vote.

When this is done, have the organisation registered under the Companies Act or the Industrial and Provident Societies Act 1924. As the manager is the keystone of the organisation, it is absolutely necessary to employ a competent manager who understands co-operative principles and has the other necessary qualifications. Pay a salary which will attract ability; have him under control, yet give him sufficient authority, and support him in his work, and success must be achieved.

If a various number of districts will make a start on the foregoing lines, a number of district packing sheds will be erected and put into operation, resulting in standardised packs and grades. From these district organisations, a central control or selling council should be formed for the purpose of controlling the marketing of fruit and the purchase of growers' supplies. Then, and only then, can prices be anything like stabilised.

The foregoing is not mere theory, or is it in the clouds as it were; it can and should be put into practice if growers will only back up such a proposition.

There are, as previously stated, numerous similar organisations in operation in America, and so far as fruit organisations are concerned, there are many fine concerns in California, Oregon, Washington, and British Columbia.

What can, and has been done in other countries, can surely be accomplished in Australia—by Australians.

#### APPLE EXPORT PACKING COMPETITION.

With a view to raising the standard of grading, packing and general "get-up" of Victorian Apples for export, Mr. H. G. Colombie has informed the Superintendent of Horticulture (Mr. J. M. Ward) that, on behalf of his principals (fruit brokers, England) he is donating a silver cup to the value of £25, together with cash prizes of £10, £5, and £3 respectively for 1st, 2nd and 3rd prizes for the best packed case or cases of Apples leaving Victoria next season for export to any firm abroad.

The conditions of the competition are:—(1) All growers who ship fruit to overseas markets to be competitors, unless they otherwise object. (No entrance fee.) (2) The three growers receiving the greatest percentage of points at the end of the season to receive the cup and prizes according to number of points gained. (3) The cup to be won three times (not necessarily consecutively) before it can become the property of the winning grower. As the cup will be more or less a perpetual prize, a very nice replica will also be awarded to each year's winner to commemorate the event. (4) The judging to be in accordance with the following points:—Export quality and freedom from blemish (20 points), general appearance (20), correct height, alignment and compactness (20), grading (15), wrapping (10), branding and neatness of case (10), wiring (5). (5) All fruit to be packed diagonally on the "cheek" system. (6) Judging will be done by taking one case at random from each consignment of, say, 50 per cent. of fruit steamers throughout the seasons. After judging is completed the case to go back into the consignment. (7) The names of each season's steamers to be placed in a hat, and the Minister of Agriculture will be asked to draw out the required number; the names of the steamers selected will only be known to the Minister and the Superintendent of Horticulture. (8) An officer or officers of the Department of Agriculture will be invited to judge the fruit.

A Competition such as this is quite an innovation, and the donor or donors are to be congratulated for their enterprise. There is no doubt that much good will be done to uplift the grading and packing of fruit for export by this means.



## ARSENIC ON AMERICAN APPLES.

English Fruiterers Fined.

## Hints for Australasian Exporters.

REPRESENTATIVES of the British fruit trade are patiently doing their best to combat the unfortunate press publicity, suggesting that harm may follow the eating of Apples sprayed or dusted with arsen-

remedies are used, Apple and Pear production is commercially impossible in most parts of the world.

Messrs. Swann and Co., fruit salesmen, London, sent to us a cutting from an English paper telling how a fruiterer was fined 20/- and £2/12/6 costs, at the Hampstead court for selling, on October 15th, 2 lbs. of American Apples "containing arsenic." Mr. Sydney Turner, for the prosecution, said that the 2 lb. of Apples bought contained 15 parts of arsenic per million, which was equivalent to one-tenth of a grain per lb.

The defendants pleaded guilty to a technical offence. They would not have bought or sold the Apples had they known arsenic was on the fruit, counsel stated that the codlin moth, which the fruitgrowers sprayed for to kill was in America, but not in England.

In another case another Hampstead fruiterer was similarly fined. The arsenic on the Apples, it was stated, only amounted to one-thirtieth of a grain per lb.

\* \* \*

The statement that the arsenic will not wash off is, of course, absurd. The spray marks are easily removed with a cloth, leaving no trace.

It is not anticipated that there will be any trouble with Australian Apple exports. The statements made by responsible Government officials on this subject are reassuring.

It is certain, however, that growers will exercise all caution when packing, and will see to it that there is no cause for complaint on the part of British buyers.

## GROWERS, PLEASE NOTE!

The Superintendent of Horticulture for Victoria (Mr. J. M. Ward) advises that a cablegram has been received from the Agent-General, London, in which he says:—

"I have received special warning from the Medical Officer of Health, Port of London, stating that every consignment will in the future be examined, and, if fruit on arrival here gives more than infinitesimal or absolutely negligible amounts of arsenic, lead, or other metallic contamination, must be subjected to drastic action.

"All future consignments will be examined from standpoint that whatever be the growers' methods, the eventual packed fruits must be in natural state and contamination free."

## Queensland.

(Continued from page 64.)

ters, "Committee of Direction of Fruit Marketing," the question arises if former criticism were not a little more than justified. The fact that growers send only one-third of their Bananas to the C.O.D. for sale, and the other two-thirds to agents, must cause some hard thinking.

It is reported that arrangements have been made to dispose of a fair proportion of Stanthorpe fruit to the State cannery, which has been of much assistance to the Pineapple growers during the glut season. Without a cheap ad. objective, it may be mentioned that this institution puts up a reliable grade and quality. During a recent visit to this State, Mr. J. M. Ward, the Chief Horticultural Officer of Victoria, is reported to have advocated the consumption of a tin of canned fruit per day. Omitting the old established brands this, in some lines, would be a strenuous undertaking. Two Victorian brands, unfamiliar brands, and afterwards exchanged for Jones', of canned Peaches, a case of each, unfortunately, were included in our household requisites—their contents beggar description. Unsuitable varieties for canning, picked in a most immature stage, and half cooked, sums up the outstanding features. As an accompaniment, local Pineapples from a private cannery were from poor acid fruit, and without the addition of a trace of sugar. If the attitude indicated is persisted in by canners, a tin per year will meet all requirements.

Humid conditions and high temperatures are reflected in vigorous growth throughout orchards—weeds not being omitted.

Amongst citrus orchards green manuring is being gradually adopted, Cow Pea and Mauritius Bean giving best results. More attention must be given to this aspect if the standard of fruit is to be raised to the original. In a rather high percentage it shows a distinct falling off, and the difficulty of disposing of 2nd and 3rd grade fruit is becoming more acute.

In addition to replenishing soil humus, the systematic application of fungicides will have to be considered. Scab of the Mandarin and Orange have been widely distributed on imported trees, and found the new situations so congenial as to practically preclude the cultivation on lines previously practised of several of the best varieties.

The volcanic lands near the coast were considered the most suitable for Orange groves, but taking all features into consideration, precedence should be given to alluvial lands of granitic origin further removed from coastal influences.

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Established 1882

A Trial Consignment solicited from Growers in all States.

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(GERMANY)

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Established 1835

FINEST TABLE APPLES  
A SPECIALTY

## Sale Room "Fruchthof"

Consignment of Apples Solicited

Best market values and  
most favorable conditions

Cash advances made if desired

ate of lead. So far the American growers are mostly affected, but the Australasian export season is imminent, and growers here may also be adversely affected.

The use of arsenical compounds for killing leaf eating pests has been common throughout the world for over twenty years; thousands of millions of bushels of Apples have been consumed, and we are not aware of one case of harm having overtaken any person because of the fact that arsenate of lead has been used in spraying or dusting. Unless these

# The Citrus Grower

## ORANGE EXPORT.

### What is the Best Sized Package?

Regarding the controversy as to what is the best sized package for Australian Oranges—dump cases (the same as for Apples), or the one and one-third case, as used in California, South Africa, and (mainly) in Australian citrus exports. Messrs. Swann and Co., fruit salesmen, of London, who annually import from 150,000 to 200,000 cases of Oranges, state that the size of the case is immaterial, provided the buyers are familiar with the package, and know the exact contents, Oranges being sold by number and not by weight.

Previous to the war (states Messrs. Swann and Co.), Valencia (Spanish) Oranges were packed in three sizes, viz., 420, 714, and 1064 counts, the weights of these being approximately 1½, 1¾, and 2 cwt. These packings, although popular at that time, are not so now, and though still shipped occasionally, meet with a very poor demand. During the war, when female labour became necessary, this packing was undesirable, on account of its heavy weight, and the package as received to-day was substituted by the Spanish packers at the request of the British Government, through the largest importers, including ourselves. The present package referred to is now described as a half case, and the counts are: 240, 300, 360, and 504 Oranges to the half-case, according to the size of Oranges. As all Oranges were shipped under these denominations, the demand soon spread for them throughout the country, and they are as well known to-day as the larger were in 1914.

We think the particulars we have given will suffice to show growers that custom in these matters is the keynote of the situation. If Oranges will carry well in dump Apple cases, and growers could agree on that packing, we have no doubt that within a few weeks of their arrival to this market, buyers would have accustomed themselves to the new method, and perhaps would appreciate it more than the present Californian size, which simply has an advantage because it is known and has satisfied up to the present the requirements of buyers on this side.

"Trays" are undesirable, unless wired together in couples, as the handling of such small packages is expensive, being almost the same as the larger boxes instead of half.

The essential is that all growers should use the same packs.

## HIGH GRADE LEMONS.

### Victorian Soil Suitable.

In the opinion of experts, Bendigo, Maldon, Sutton Grange and some of the irrigated districts, particularly those situated on the heavier soils, such as at Elmore, Bamawm and Nanneela, are eminently adapted to the production of a very high quality Lemon for the purpose of local and export market in Victoria. In Italy certain districts with certain soil peculiarities produce the best type of Lemons for export purposes.

## COST OF ORANGE PRODUCTION.

### Interesting Figures from California.

**C**OSTS relative to Orange production in California were recently compiled by the Citrus League, and published in the "Citrograph."

The averages of 630 accounts dealing with 16,822 acres, show the "cultural costs" to have been 5/6, picking, handling and packing 3/3, selling and advertising 5d. Total on rail 9/-. Average freight and refrigeration 6/3, total delivered cost in American markets 15/6.

### The costs per acre:

|                         |     |    |   |
|-------------------------|-----|----|---|
| Fertilisers and manures | £13 | 0  | 0 |
| Water                   | 4   | 8  | 0 |
| Fumigation and sprays   | 5   | 0  | 0 |
| Frost protection        | 0   | 12 | 0 |
| Cultivating work        | 15  | 0  | 0 |
| Pruning                 | 1   | 3  | 0 |
| Materials, etc.         | 0   | 12 | 0 |

### General:

|                                                         |    |    |   |
|---------------------------------------------------------|----|----|---|
| Taxes, Insurance, Maintenance, Depreciation, Management | 10 | 10 | 0 |
|---------------------------------------------------------|----|----|---|

Grand total per acre .. £51 5 0

Total yield in boxes ... 179.1

Converted from dollars to sterling at par, ignoring small decimals.

In 1920 it was a rough estimate that 200 boxes per acre usually "paid" expenses and it needed 300 to give a fair profit on investment. Really good groves yielded double this and more; whilst some exceptional and small groves had topped the 1,000 boxes. The exact yield in 1922 of one grove of 100 trees 30 years old was 1,092 packed boxes.—"S. African Citrus Grower."

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Correspondence Invited.

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HOBART

## CITRUS GROWERS' CONFERENCE.

Melbourne, February 3.

The Annual Conference of the Victorian Central Citrus Association will be held at Melbourne, commencing February 3rd; the proceedings are to be opened by the Minister for Agriculture (Col. Bouchier).

A representative attendance is anticipated.



Australasian Representative:

**H. G. COLOMBIE**

Temple Court, Melbourne

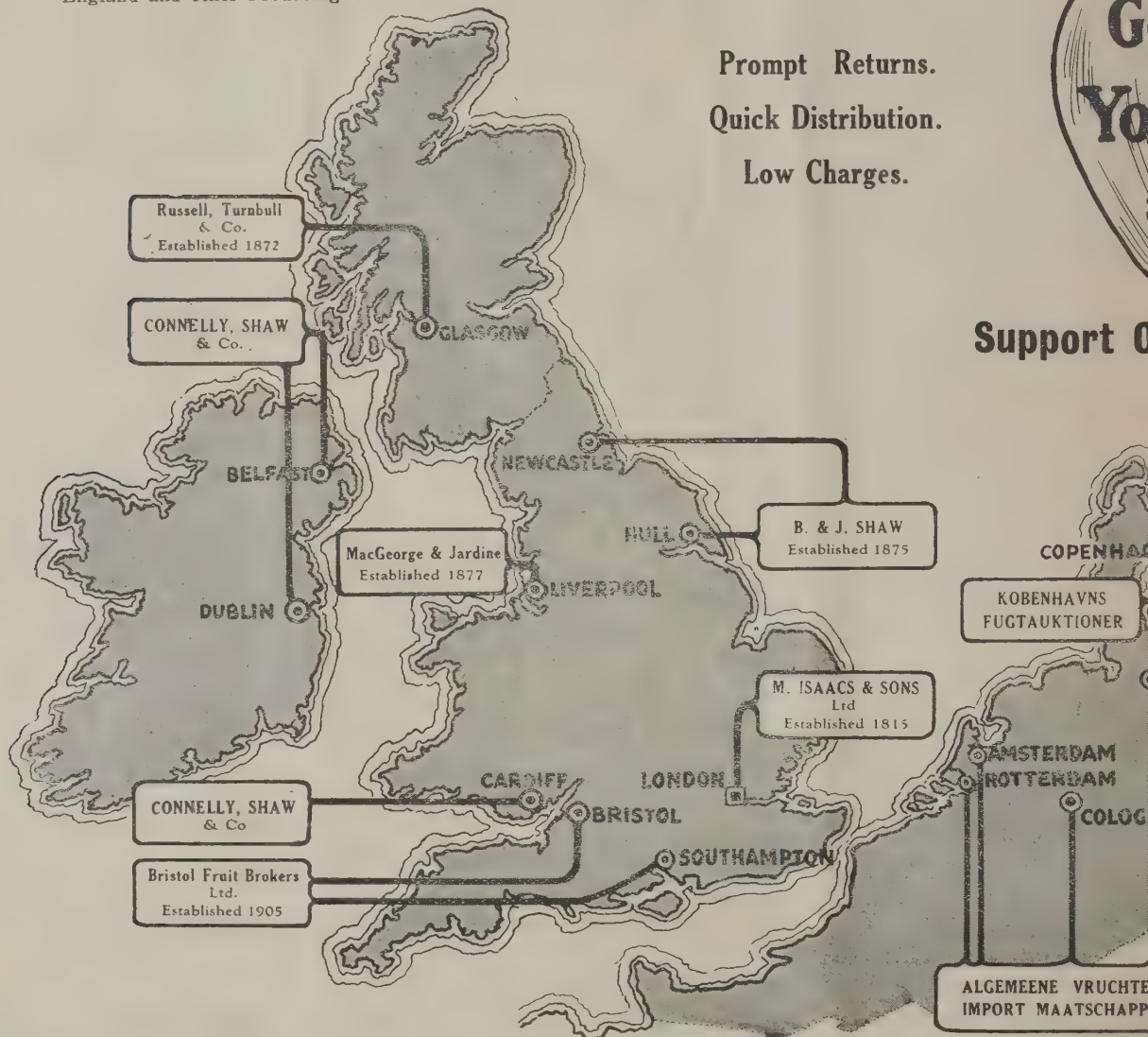
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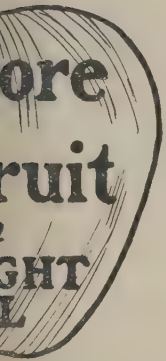
By this system **BUYERS** are **MADE** to **COMPETE** for the fruit to the **BENEFIT** of **YOUR RESULTS**; whilst by other methods Salesmen compete to obtain buyers.

**CATALOGUES** are printed for Buyers before sale, and reprinted after sale **SHOWING ACTUAL PRICES PAID** for your fruit. No manipulation of results possible.

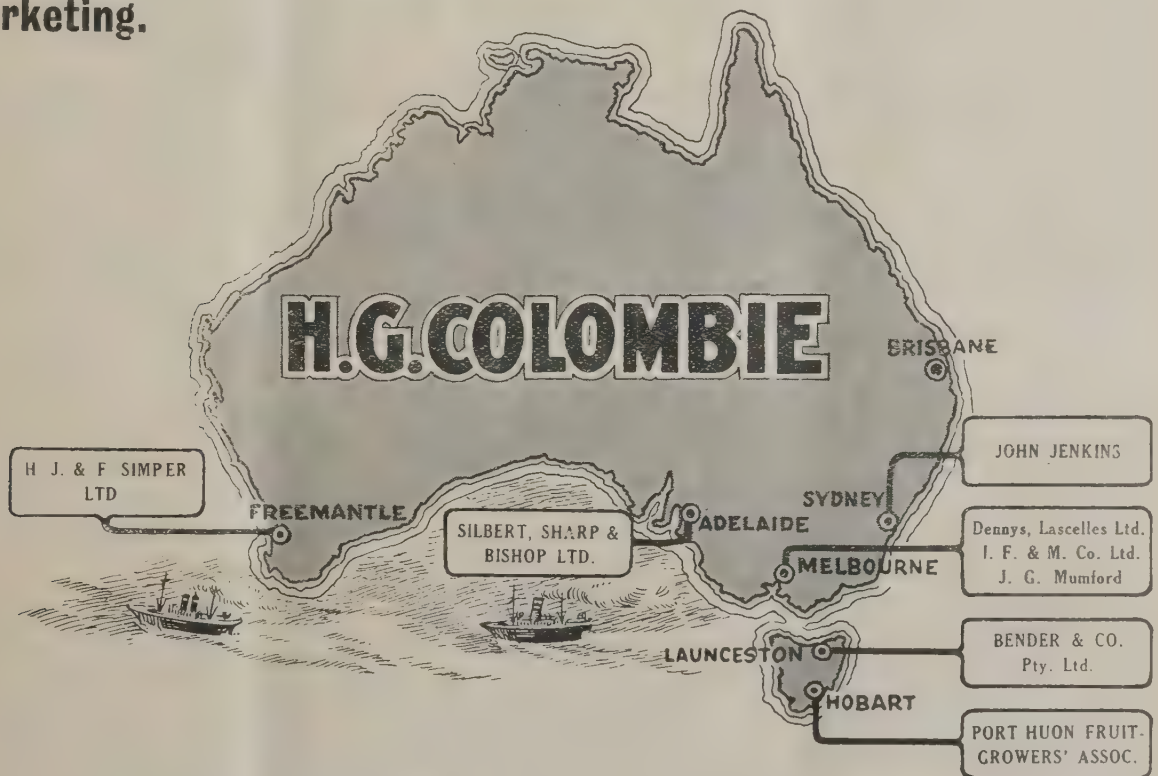
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## Western Australia.

### PROPOSED NEW ORGANISATION.

**O**WING to the fact that the Western Australian Fruit Advisory Board no longer exists, and the growers in conference opposed the Fruit Marketing Organisation Bill (which was subsequently defeated in the Legislative Council), the growers, through a sub-committee at the recent conference, drafted a constitution for submission to the incoming Executive, detailing a plan for organising the industry.

The following report was submitted:—

The name shall be "The West Australian Fruit Industry Organisation Board."

The central board shall be constituted of the following sectional representatives:—

**Apples and Pears.**—Bridgetown District, Manjimup, Balingup, and Mul-lalyup, 1 member; Mount Barker District and Great Southern line, 1 member; Donnybrook district, Preston, Argyle, Boyanup and Capel, 1 member; Rest of State, 1 member. Total, four members.

**Citrus.**—Armadale South, one member; Gosnells and surrounding districts, including the hills, one member; Upper Swan, Chittering, Toodyay and Midland line, one member. Total, three members.

**Stone Fruit.**—Metropolitan area and Maida Vale to Armadale, one; the Hills district, one; Fremantle area, Claremont to Spearwood, 1; total, three members.

**Grapes and Dried Fruits.**—Fremantle district, one; Swan district (one of whom to be dried fruits), 2. Total, three members.

Total of Board, 13 members.

**Method of Appointment.**—The members of the Board shall be elected by the growers; the method of ballot to be decided by regulation of the Board. The first provisional board to be elected by general meetings, called in the different districts. The Board shall draw up a constitution to regulate the operations of the Board and such by-laws as may be found necessary from time to time.

**Finance.**—The finances shall be provided by a levy on every case of fruit marketed or exported, not to exceed 1d. per case. The local associations to be financed by the Board out of the funds raised.

**Objects:—**

(1) To organise the fruitgrowing industry throughout the State, and place same on a stable basis.

(2) To act as the medium between the growers and the State and Federal Governments in matters appertaining to the industry.

(3) The Board shall be non-commercial and non-political.

(4) To confer with shipping agents and others with regard to transport of fruit overseas, and the opening up of new markets.

(5) Any matters in which general benefits to the industry can only be served by co-operation.

(6) For the assistance in scientific solution of the various problems of the industry.

(7) To improve local marketing conditions.

(8) To educate growers in the proper method of preparing fruit for market and for export.

(9) When funds permit, to carry out a properly co-ordinated system of advertising West Australian fruit in the State and overseas.

(10) To appoint members to the Australian Fruit Council or any body that from time to time may be functioning.

(11) To advise in the case of any emergency or crisis that may arise affecting the industry.

### Cultural Notes for February.

(By Geo. W. Wickens.)

Gathering and marketing of stone fruits will still be in full swing this month, and early varieties of Pears and Apples will also claim attention (writes Mr. Geo. W. Wickens in the W.A. "Journal of Agriculture.") The very early Pears, such as Citron des Carmes and Jargonelle, are allowed to ripen on the trees, and are fit to gather in December and January, but these are poor in quality, and are not recommended for commercial orchards. Practically, all the best Pears must be gathered before ripening, and allowed to mellow in storage before they attain the peak condition of flavour and texture.

In a less degree this applies also to Apples, but there are some good varieties of the latter fruit which are excellent for dessert purposes when freshly pulled from the trees; Gravenstein and Jonathan being two good examples.

The ease with which the stem of the fruit separates from the spur to which it is attached, is a good guide as to the fitness of the fruit for gathering.

This month usually sees the first shipment of Apples to England, but it is hoped that the growers will refrain from exporting immature fruit this season, and put off export until

about the end of the first week in March. This applies particularly to Jonathans, which should not be gathered until they have attained a rich red color. The early ripening specimens generally are borne on terminal buds; they are soft and spongy, lacking in color and quality, and very apt to develop bitter pit and Jonathan Spot on the voyage. They open up so badly on arrival in England that they spoil the sale of later consignments of the same variety, which, when of 2½ inches to 2½ inches in size, and gathered at the right time, is one of the best export Apples grown. If an early picking must be effected, then Cleopatra is much safer to gather on the green side than Jonathan, but, as stated, the advice is to entirely refrain from exporting immature Apples.

### Interesting Crop Report.

Mr. Geo. W. Wickens, Officer in Charge Fruit Industry, reports under date December 22nd:—

The Apple crop last year amounted to 656,881 bushels, and this year I do not anticipate that it will amount to more than 500,000 bushels.

Jonathans are good; Cleopatras, medium; Dunn's, taking the State as a whole, are light, but there are some orchards in nearly every district, carrying heavy crops. Yates and Granny Smith's, taken on the whole, will yield a good crop.

Pears will not be as heavy as last year. William's will be considerably under, and of the main export varieties produced in this State, Winter Nelis is the only one that has set a heavy crop.

Early Apricots were very heavy; mid-season and late are medium to good.

Peaches and Nectarines are good to heavy.

Plums.—English, medium; Jap.; medium to good.

Grapes.—Table, Drying and Wine varieties, heavy; Ohanez, our best export Grape, showing a big increase on last year's crop.

Perth (17/12/25).—Mr. J. Ramage (Paterson and Co. Ltd., Perth) states that after travelling through the fruit producing areas, the crop is a medium one,—lighter than last season. At blossoming time the prospects looked exceedingly bright; in some districts thrips did much damage, whilst in other districts late frosts are given as the cause of failure. Mr. Ramage is of the opinion that growers will harvest more fruit than was forecasted in a rather gloomy estimate.

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#### ANSWERS TO CORRESPONDENTS.

**Pollinating Delicious and Jonathan Apples.**—R.F.D., Kilsyth, writes:—"Would you please inform me through your paper whether Delicious Apples are a good variety to cross pollinate Jonathans, and if not, do Delicious themselves require another variety to cross pollinate them?"

**Answer,** by J. M. Ward (Superintendent of Horticulture).—Delicious interplanted with Jonathan, say, four rows of each, gives the most satisfactory results in regard to cropping. These varieties blossom at the same period, and one will pollinate with the other.

**Answer** (by John Brunning & Sons, Somerville).—Delicious is not a good Apple to pollenise Jonathan, being rather late in flowering. It will, however, pollenise them if the trees are red-oiled about the beginning of August—the application of oil makes the trees bloom earlier, and if the Jonathans are left, the flowering period of the two varieties will be about the same. Delicious is an Apple that really requires pollenising, and Rymer and Reinette du Canada are about the most suitable.

**Answer** (by G. W. Peart, Bairnsdale).—Delicious is one of the best Apples known and will fertilise Jonathan, especially the later blooms to perfection.

\* \* \*

**Lead Arsenate and Oil.**—A subscriber from Kelso, New South Wales, writes, "Relative to your very instructive and interesting article—'Fighting the Codlin Moth,' in the November number of the 'Fruit World,' by J. H. Lang, Harcourt, Victoria; I tried in my last arsenate spray 1 gallon of oil (Gargoyle) and two lbs. of arsenate of lead powder (orchard brand); in the first vat I first nearly filled the vat with tank water (rain), then emulsified the oil (using a little soap powder), and poured into the vat, then mixed the arsenate in a little water and poured into vat; after spraying for a while I found the arsenate like a scum on top of the mixture, and when the vat was empty there was a thick oily coat around the sides of the vat.

In my second vat I emulsified the oil, and poured into vat, then put the arsenate powder direct into the mixture (emulsified oil), and after spraying for some time I found the thick scum on top of the spray mixture. I

came to the conclusion that perhaps the arsenate of lead (orchard brand) won't mix with the oil.

I would be glad of your opinion and advice in this matter; perhaps the oil (red Gargoyle) is not suitable, or the brand of arsenate is at fault; or I may not have mixed it properly; I may state that the vat has a very good agitator."

**Answer** (by J. H. Lang).—I have not tried to mix oil with arsenate. The chief chemist of the Vacuum Oil Co. Pty. Ltd., states that the design of the formula of Gargoyle Spraying Oil will not permit of a mixture with arsenate of lead. Several tests made in the laboratory resulted in precipitation and demonstrated the futility of the mixture as a combined spray.

The oil used in Colorado is probably of a different nature. I have written for further information which I trust will be available for next season.

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## Tasmania.

Growers Resent Delay in Gazetting New Grading Regulations.

Cultural Notes.

By Our Correspondent.

**T**HE Apple crops are generally making satisfactory development. During December and early January the weather continued very dry, affecting, to a certain extent, the berry fruits. Good rains have now fallen through the Huon and Channel districts, which have considerably improved the prospects for the season.

Parts of the Bagdad Valley and districts in the Upper Derwent are in need of moisture. The Tamar Valley, N.E. and N.W. centres report satisfactory growth, with splendid crops.

### Pear Crop Light.

It is now evident that the Pear crop will be generally light throughout the State. A few varieties, such as Beurre Clairgeau, Beurre de Capiaumont and Beurre Bosc are carrying fair crops, but the majority of the commercial varieties will fall much short of normal.

### Apricots also Light.

The Apricot crop is now being harvested. Although rains were experienced in mid-January, they in many cases arrived too late, and crops are generally lighter than expected, whilst on the drier banks the fruit is below normal size.

### 1926 Export Season.

Fruitgrowers are busily preparing for the coming export season, and although a number of buyers are operating and offering satisfactory prices, the general tendency is to ship on

consignment, as prospects point to a satisfactory season.

From the figures that are to hand it is probable that the coming season will eclipse the million and a half bushel overseas export record of 1923.

Applications for space are yet to be finalised, but it is known that many growers are forwarding their whole crops to the English and European markets, where formerly a large proportion were reserved for interstate trade.

The Tamar districts expect to double the quantity exported last season, shipments being in the vicinity of 250,000. A number of boats have been engaged to visit Beauty Point during March and April, whilst southern growers will be served by approximately 33 vessels, amongst which are a good proportion of the newer and faster steamers.

### Overseas Export Grades.

Tasmanian fruitgrowers are still awaiting the decision of the Customs Department in respect to the amendments to the overseas export Apple and Pear standards, which were requested by the Conference of Ministers of Agriculture and the Australian Fruit Council.

It is now approaching the commencement of the export season, and growers are desirous of making arrangements well ahead, so that everything may be in working order when the first boat arrives in February. This matter has now been before the Cus-

toms Department since last September, and except for the statement that the suggested alterations had been submitted to the High Commissioner in London for consideration, no advice as to whether the Department was prepared to put the recommendations of the Council into force, has been forthcoming.

The delay that has resulted is somewhat extraordinary. If a Conference of Ministers of Agriculture, upon which the respective State officers in charge of the fruit industries are represented, and a body such as the Australian Fruit Council are not qualified to give advice on such a matter, it is time that the organisations were advised that they were wasting their time in meeting, and the Council disbanded. Meanwhile the producer must submit to regulations that are brought into force to control his product with very little consideration whether such are of a practical nature, and can be given effect to in the orchard.

### Arsenate of Lead upon Apples.

It seems that each year the Apple and Pear export industry has to face some new obstacle to its progress. With good crops, plenty of vessels to carry the fruit, and prospects of a good market, fruitgrowers were beginning to think that at last the fates had smiled on them. Now that most of the difficulties experienced in the past had been surmounted, it remained for someone to raise the arsenate of lead bogey. Arsenate of lead has been used in controlling leaf and fruit eating pests in Tasmania for the last 15 years, and no case has been recorded of injury directly arising in the consumption of fruit that has been treated in this way.

In this State the last arsenate spray is applied about mid-January. This gives an interval of over two months

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between its application and the period when the earliest fruits come upon the overseas markets, making it almost impossible for any active spray ingredient to be present on the fruit. Another important phase of the matter is that all sprays are put on in liquid form, and are not so likely to cause concentrations of spray material upon the fruit as the powder forms that are dusted upon the trees in other parts of the world.

It is extremely unfortunate that so much advertisement has been given to the scare by the English and Australian press without first finding out the true position in Australia. Such has already been damaging to the trade, and if investigated would have been found to be entirely unwarranted and misleading.

### Department of Agriculture.

During the month Dr. Cameron, the Victorian Director of Agriculture, has been visiting the principal producing centres of the State.

Besides advising as to the best means of meeting the serious decline in the rural industries, Dr. Cameron has been requested to report on the present organisation of the Department of Agriculture with a view to suggesting any improved methods of . . . . which will ensure the Department giving a more effectual service to producers. It is understood

that the report will be presented to Parliament during the month.

### Agricultural Bureaux.

A scheme for the inauguration of Agricultural Bureaux throughout the different producing centres of the State has now been launched, the initial meeting, which was opened by the Hon. Premier, Mr. J. Lyons, being held at Bellerive, being well attended by representatives of all the rural industries. Mr. E. A. Counsel (late Secretary of Lands) and Mr. F. H. Johnston, B.Sc. (Agricultural Chemist) have been appointed as organisers of the movement, and will visit the different districts with a view to assisting towards the formation of branches. The principal activities of the branches will embrace the following:—(1) Regular meetings. (2) Departmental lectures and demonstrations. (3) Experimental plots. (4) Pure seed growing. (5) Field trials of machinery. (6) Field competitions. (7) Competitive exhibits at shows. (8) Library. (9) Museum. (10) Boys and girls competitions. (11) Boys and girls agricultural clubs.

### Packing Classes.

Arrangements are now in hand for the continuation of these classes during the coming export season. Last year over two hundred children received instruction in packing and preparing the fruit for market in the different centres.

Several new districts have applied for classes to be held during the coming season. The instruction will be carried out by Mr. H. A. Turner, Assistant Fruit Expert in the North, and Mr. W. C. Page, Packing Instructor in southern districts.

### FRUIT CROP PROSPECTS.

By P. H. Thomas, State Fruit Expert.

It is now possible to forecast with some degree of accuracy the prospects of the different fruit crops grown in the State, writes Mr. Thomas on Dec. 22nd.

During the past few weeks the officers of the Fruit Division have been keeping touch with the different centres with the object of observing the setting and development of the principal varieties.

The following is an approximate estimate of the crops to date:—

### APPLES.

Heavy.—Cleopatra, Alfriston, Tasmania, King Pippin, Adams Pearmain.

Good.—C.O.P., Delicious, Duke of Clarence, Stone Pippin, Sturmer.

Medium.—French Crab, Jonathan.

Light.—Ribston Pippin, Scarlet, Dunn's, London Pippin.

The other varieties not specified are generally good, and I would estimate



that at least a 75 per cent. crop (3,000,000 bushels), should be harvested for the whole State if conditions continue favourable.

The fruit is generally clean and well developed, and should pack out a high percentage of quality fruit.

In certain districts North and North-east of Hobart, particularly the Derwent Valley, Campania, and parts of Bagdad, a heavy frost was experienced in early November. This was disastrous to a number of

growers, the total loss being within the vicinity of 40,000 bushels.

#### PEARS.

With the exception of the varieties Clairgeau, Napoleon, Gansells Bergamot, and Capiaumont, which are carrying only medium crops, the other main commercial kinds are generally light.

The Pear crop will be much below normal this season and it is improbable that more than a half crop (125,000 bushels) of fruit will be pro-

duced. Unfortunately the shortage is confined to the principal export varieties such as Winter Cole, Winter Nelis, Glou Morceau and Josephine.

**Apricots.**—Crop normal,—estimated at 150,000 bushels.

**Plums.**—Of the principal commercial varieties grown, very few can be recorded as having a heavy setting. Coe's Golden Drop, Magnum Bonum, and Angelina Burdett are from fair to medium, whilst Green Gage, Grand Duke and President are generally light.

## Editorial.

**T**HOUGHTFUL and progressive growers have ever in mind the better organisation of the fruit industry in its varied branches.

The idea seems to be now well rooted that each section must organise first within its own limits, Apples, Citrus, Dried fruits, Canned fruits, Berries, etc.

That progress is being made is undoubted. The development of cool storage on co-operative lines by the growers has been one of the steady factors in that section of the industry. There is also the bright fact that export is safe and profitable.

In the citrus section growers are also drawing closer together. The organisations will not be built in a day, and it is quite possible that in the initial stages mistakes will be made. These, however, are good teachers, for experience was ever the best guide. Growers will surely exercise patience and make sure that the foundations of their organisations are strong, for only on a strong foundation and a sure basis will success be built.

There are bright examples of successful co-operation in Australia, whilst as regards U.S.A., the trail has been well blazed. In the latter country the growers have organised into local packing centres, district exchanges, culminating in a Central Exchange, which works in harmony with the selling trade and the public, in securing the best average prices possible for its members.

Governments can do much to help, particularly in regard to research work, and in making it possible for growers to organise more effectively. In the organisation itself, however, the experience here, as well as in other parts of the world, points to the necessity of the growers controlling their own enterprises.

In the dried fruits industry, which is still passing through a troublesome period, far-seeing leaders are urging the growers to retain their own organisation and to strengthen it against the day when the "Control Board" ceases to function.

Growers of canning fruits have seen the necessity for united action, and the results should prove of immense benefit.

As the younger men come forward to step into the places of the pioneers in the industry, it is to be hoped that many will travel to England, U.S.A., Canada, and South Africa, to absorb the best ideas, and with receptive minds absorb the best, in order to adapt the same to conditions in Australia and New Zealand.

Australia is fertile land, with vast possibilities, she calls for the best in us to make our country safe and prosperous, for the sake of the present and future generations.

#### To Association Secretaries.

The "Fruit World" will be pleased to publish reports of growers meetings, and invites secretaries or press correspondents to send in reports.

In response to our recent letter, the Sunshine Standardised Fruit Co. Ltd., Middleton, Tasmania (W. A. Philp, Manager), writes, 21/12/25:—

"We note your offer to ventilate any matters of importance, and will be pleased to avail ourselves should occasion arise. Thanking you—"

#### SCIENCE AND INDUSTRY.

##### Research Work Essential.

#### The Fruit Industry Will Greatly Benefit.

##### Views of Sir Frank Heath.

**S**IR FRANK HEATH, Secretary of the British Department of Scientific and Industrial Research, who is now in Australia investigating, on behalf of the Commonwealth Government, some pressing national problems regarding the efficiency of our primary and secondary industries, has almost completed his task. It is hoped that, as a result of the investigations, there will be closer co-operation between the British and Australian Scientific De-

partments, and that Imperial trade will be promoted.

Amongst other matters, Sir Frank Heath will report on the reorganisation of the Institute of Science and Industry. From this institution much is expected in the solving of some of the problems of fruit production and transport.

Already the Institute is assisting in the Banana Bunchy Top Research, and in citrus transport investigations as well as in other ways. With a reorganised Institute, sufficiently financed, and with a trained staff of scientific workers, obscure problems affecting the fruit industry and other primary as well as secondary industries, can be probed.

Sir Frank Heath insists on the paramount importance of assisting the primary industries. He states:—"In my judgment, the needs of the primary industries must stand first, because it is the exportable surplus, of the primary industries, which is paying for the interest and sinking fund of Australia's large external debt." It is more economic to "make two blades of grass grow where one grew before," than to increase the areas under cultivation.

Scientific methods should be applied by producers in the working of their orchards and farms. The application of scientific methods would make possible the export of fruits, about which there was now uncertainty and loss.

"There are three outstanding impressions on my mind," stated Sir Frank recently. "(1) The vastness of the subject and the shortage of trained men. (2) The wide distances and the need for co-operation between the States and the Commonwealth in dealing with scientific investigations. (3) The necessity for a concentrated attack on the problems of the primary industries.

\* \* \*

Fruitgrowers will be awaiting with the keenest of interest the publication of Sir Frank Heath's report, and the action arising from the application of the methods advocated.

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And Dunedin

# Cold Storage In Australasia

## COLD STORAGE TESTS.

### Temperatures for Apples and Plums.

### Freezing Fruit for By-Product Use.

Tests recently carried out by Mr. J. L. Fidler at the California Experiment Station on the effect of storage temperature upon the keeping of Apples, showed that with a very few exceptions 30-32 deg. F. is a most satisfactory range, fruits held at this point keeping on an average one month longer than those at 36 deg. In addition, the development of scald and blue mould was hindered by the lower temperature. As exceptions, Jonathan kept best at 36 deg., and Yellow Newton at 40 deg. At 45 deg., wilt, blue mould and scald materially injured all Apple varieties.

Plum storage studies conducted by E. H. Rawl, showed 32 deg. to be most favorable for fruit picked at the proper stage of maturity. A gradual increase in sugar content was noted with the approach of maturity on the tree, suggesting the advisability of leaving Plums on the tree until quite ripe.

### Freezing Fruit for By-product Use.

In experiments conducted by J. G. Brown, under the direction of E. L. Overholser, and W. V. Cruess, satisfactory results were obtained in the preservation of fruits and berries in a frozen condition.

Strawberries, Blackberries, Raspberries, Loganberries, Cherries, Apricots, Peaches, Figs, and Grapes stored with dry sugar or covered with sugar solutions did not lose their original color or flavor after being kept frozen at a temperature of 10 deg. F., for six months. The texture of the fruits frozen in sugar solution was better after thawing than of those mixed with sugar alone or frozen in water. No appreciable changes took place in the chemical composition of the fruit. The frozen fruits were found satisfactory for making jams, jellies, preserves, pie filling, ice creams, and desserts. For use as pie fillers berries, Apricots, and Peaches proved most desirable when crushed and mixed with an equal weight of sugar before freezing. For jams and pre-

serves, berries were most satisfactory when kept whole and mixed with an equal weight of sugar before freezing, and Apricots and Peaches when stored in a 30 to 45 per cent. sugar solution. For Figs to be used for preserves, the freezing method proved cheaper and more satisfactory than the customary practice of canning them in water.

[California Station Report, 1923; Experiment Station Record, January, 1925, reprinted in Monthly Bulletin of Institut Internationale du Froid, July, 1925.]

## APPLES—SCIENTIFIC RESEARCH.

### Apple Scald, Internal Breakdown, Brownheart.

### Valuable Records.

Special Report No. 23, of the Food Investigation Board, Department of Scientific and Industrial Research, London, is to hand. This report deals with Apple Scald, Internal Breakdown and Brownheart.

The section on Apple Scald reviews results obtained in experiments by the U.S.A., Department of Agriculture, which have already appeared in the "Fruit World." Those on Internal Breakdown and Brownheart confirm the conclusions arrived at previously, and published in Special Reports Nos. 20, 21, 22, of the Board, and which have already been reviewed by the "Fruit World."

This valuable summary costs 1/3 posted.

## NATIONAL ORCHARD SPRAYS.

### Name Now Changed to Lanes' Ltd.

In view of expanding business and the opening up of new departments (apart from orchard lines), the name of the National Orchard Sprays and Disinfectants Limited, has been changed to Lanes' Limited, as from the 1st December, 1925. The company will trade under the latter name and management, and at the present address of the office and factory—89 Abercrombie Street, Sydney. Readers are asked to note the change in name.

## EXPORT OF FRUIT.

### Packing and Marketing Suggestions.

As shipments of Apples from Australasia are about to commence, Messrs. M. Isaacs and Sons Ltd., Fruit Brokers, London, send along a few suggestions with regard to packing, etc.—

**Packing.**—We would advise you this season to improve the appearance of your container—make it more attractive. Eliminate all unnecessary and unsightly brandings, leaving only the essential marks for identification. Care should be taken in nailing the boards, a few nails more may save considerable loss in slack cases. Strapping is also necessary. If all cases were wired, slack and broken would almost disappear, saving loss to the grower and time to the broker in rendering settlement. Care must be taken in grading and the selection of fruit. Avoid packing inferior fruit, one damaged Apple may, and does, affect its neighbor. Remember the old adage "Penny wise and pound foolish." Avoid slack packing, buyers study marks and "once bitten, twice shy." Small parcels should be avoided. Lines under twenty are not so acceptable to buyers as larger parcels. Do not place an excess of wood-wool in the top or bottom of the case. One thin layer of either wood-wool or corrugated cardboard is sufficient. Ship only well known best varieties. If the season should be a poor one, inferior varieties would be the first to suffer. Freight and charges are the same for good and poor. Throughout endeavour to maintain a high standard, and you will find returns will justify any added outlay and care.

**Marketing.**—It is too early yet to forecast the future, but we think this season should be a favourable one. Early shipments depend entirely upon the quantity of American and Canadian Apples still available at the end of February. The American crop is considerably larger than that of last season, an excess of 17½ per cent. was reported, since slightly diminished owing to a heat wave in Virginia. The home crop was also considerably larger—an excess of 66 per cent. over last season. This fruit, being on the market, has caused America to withhold shipments somewhat, which seems to indicate a long American season. However, it is absolutely impossible at the moment to foresee the position, as it will be when Australian Apples arrive.

Last season shipments from Australia continued too long, and we would point out that cargoes arriving after 30th June run a grave element of risk from competition with English and Continental soft fruit. We do not wish to see this season terminate disastrously.



## Black Cherry Aphis

Valuable Test at Fruit Demonstration Plots Conducted by the Tasmanian Department of Agriculture.

Success with Nicotine and Oil.

By P. H. Thomas, State Fruit Expert.

**B**LACK CHERRY APHIS (*Myzus Cerasi* Fab.). Cherry growers in Tasmania have had reason until recently to congratulate themselves on the immunity of this fruit from the many diseases and pests that occur amongst others of the deciduous order.

During the last two or three seasons a somewhat new pest has appeared in the various districts of the state, and has developed until it seems to be fairly well established in the Cherry growing areas. Although the black Cherry aphis (*Myzus cerasi*), is new to Tasmania, it has been common amongst mainland orchards for some years. Indications seem to point to its introduction into the State upon imported nursery trees, especially as the breeding habit would allow a ready means of dissemination in this way. Last season the infection in a number of cases has been particularly bad, and reports are to hand of almost total defoliation and loss of crops,

whilst doubt is expressed whether some of the worst affected trees will recover.

**Life History.**—Contrary to most other species of aphids, the over-wintering eggs are laid in the cracks and crevices of the bark, from which the young hatch out in the following spring. The aphids breed very quickly during the growing season, and within a few weeks some thousands of young are produced. These settle on the young foliage, and feed upon the juices by sucking them through their beak-like proboscis. This has the effect of draining and curling the leaves into many fantastic shapes, affording good cover to the newly developing colonies, and making control measures exceedingly difficult.

In accordance with the policy of the Fruit Division to arrange and conduct demonstration plots in the different fruit districts of the State, an area of Cherries was selected at Judbury (Upper Huon), situated upon Mr. H. Skinner's property, to show the most effectual method of dealing with this pest.

The area was divided into four different plots, comprising large trees of approximately 25 feet in height. These have been established for a great many years, being some of the

oldest trees in the district, and have generally borne satisfactory crops.

The Black Cherry Aphis was first noticed on the orchard about three years ago, and last season it was evident that it had spread throughout the area and was seriously injuring the spurs and fruiting laterals.

The following treatments were applied to the respective plots:—

A. Oil Emulsion 1 gal. of concentrate to 10 gals. of water applied at the dormant period (Aug. 13th), followed by a Nicotine Sulphate spray after the petals had fallen (Oct. 28th).

B. Lime Sulphur, 1 gal. of concentrate to 8 gals. water applied at dormant period (Aug. 13th), followed by a Nicotine Sulphate spray after the petals had fallen (Oct. 28th).

C. A Nicotine Sulphate spray applied after petals had fallen (Oct. 28th).

D. Check trees untreated.

The Nicotine sprays were applied at a strength of 1 pint concentrate to 50 gallons of water plus 2 lbs. of soft soap.

The object of this demonstration was to show the importance of treating the trees with a strong contact spray at the late dormant period in order to destroy the eggs of the pest, and prevent a heavy re-infestation of the new wood. The results obtained clearly emphasised this essential.

Plots C and D which did not receive this treatment, were showing numbers of colonies of the aphid on the new growths at October 28th.

A few days later, owing to the development of the pest upon the untreated plot (d), it was found necessary to treat the trees with strong

## Latham Dehydrators

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### Some Installations for Foodstuffs.

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| Charles Martin, Yackandandah                            | Prunes                         |
| Swallow & Ariell Ltd. Port Melbourne.                   | Carrots Turnips Cabbages, etc. |
| Woorinen Co-op. Pack Shed, Woorinen                     | Sultanas Raisins etc.          |
| Aurora Pack Co. Pty. Ltd., Irymple.                     | Sultanas Raisins etc.          |

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ATOMISES FREELY  
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Remains in perfect  
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**SPRAYOL** is entirely free from injurious  
acids and chemicals that might be harmful  
to trees and foliage.

**SPRAYOL** will enable the Orchardist to  
combat and eliminate all orchard pests  
and diseases.

**SPRAYOL** performs its work efficiently  
and is most economical to use.

# SPRAYOL

THE PROVED IDEAL ORCHARD SPRAY

OBTAINABLE AT ALL STORES

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.. BY ..

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BRANCHES IN ALL STATES



Nicotine Sulphate solution to prevent it spreading. Plot A, in which the worst infestation was experienced last year, is practically free from the pest.

In Plot B, a good control has been exercised, but occasional stray colonies of insects can be found.

One of the most outstanding features of the demonstration is the marked healthy development of the whole of the trees on Plot A over the other sections. Not only is the fruit more forward and the foliage much greener and larger, but a better setting has taken place and the trees are carrying much heavier crops.

**For Promptness, Reliability  
and Careful Attention**

CONSIGN YOUR FRUIT TO

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FRUIT EXCHANGE,  
SYDNEY, N.S.W.

A TRIAL SOLICITED.

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## Fighting Orchard Pests.

### Bryobia Mite, Red Spider.

Owing to the dry weather, Red Spiders are causing much damage to the leaves of Apple and other trees. The eggs deposited in the autumn, hatch with the first warm weather in the spring, and the mites at once begin to work. Their development is very rapid, and power of reproduction exceedingly great, so by summer there are often sufficient numbers to do much damage. The mites, in feeding, produce a fine yellow mottling effect upon the leaves, eventually causing them to turn yellow and to drop prematurely.

Experiments with atomic sulphur, applied at the rate of 10 lbs. to 100 gallons of water, have given excellent killing results. A dormant spray of lime-sulphur, 1-10, is also valuable. Red oil is also recommended as a winter spray.

### Cutworms.

The caterpillars of cutworms are usually fairly numerous during the early part of February. These smooth, dull brown or mottled larvae hide in the soil or under debris in the daylight, and feed at night. They often

ascend Apple trees and eat holes in the fruit. Spray with arsenate of lead, or use poisoned baits. A formula for poisoned baits which has given good results is made as follow, viz.:—

- 1 quart bran
- 1 teaspoonful Paris green
- 1 tablespoonful treacle.

with sufficient water to moisten the bran. Mix the bran and Paris green thoroughly, while dry. Dissolve the treacle in the water and wet the bran and poison with the same, stirring well, so as to dampen the bran thoroughly. Distribute these baits in small pieces amongst the trees just before dusk. Keep fowls and domestic animals out of orchard when baits are placed therein.

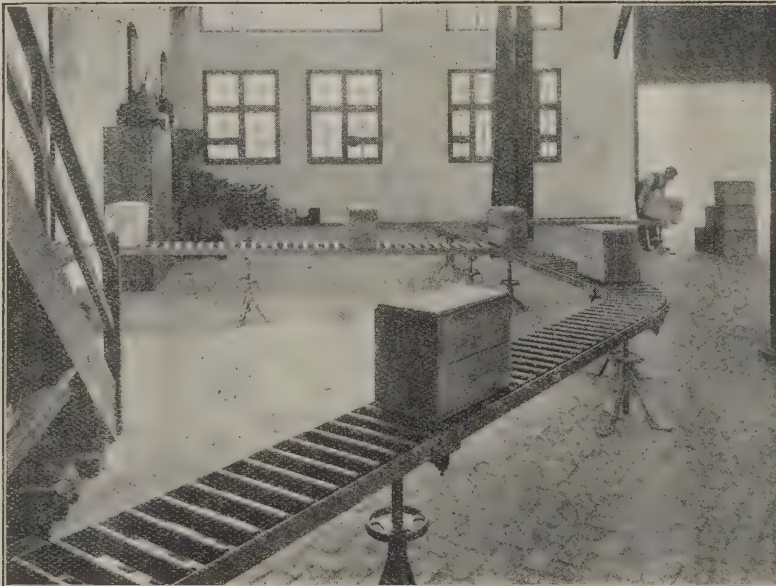
### Apple Pinara Moth.

The grey larvae of this moth have made their appearance in several fruitgrowing districts. They are very destructive to the fruit spurs, leaves and bark of Apple and other fruit trees. Sometimes the colour of the larvae resemble the bark of Apple trees, and it is often difficult to detect them. Use arsenical sprays.

### Woolly Aphis.

To the average orchardist this insect is of too common occurrence to

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**Our Gravity Ball Bearing Roller Conveyor** will solve your handling and conveying problems by carrying your cases wherever you desire. **No Power Required.**

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need any suggestions for its identification. At the present time these insects are exceedingly abundant.

Experiments, carried out by the Government Entomologist and Inspector Pilloud, with nicotine sulphate and red oil have given excellent results. Pamphlets regarding these experiments can be obtained gratis from the Department of Agriculture, Melbourne.

The *Aphelinus* parasites are also giving good results. These can also be obtained from the Agricultural Department.

#### Thrips on Citrus Fruits.

These cause young Oranges to turn a sickly yellow colour, owing to the insects sucking out the juices. In the Goulburn and other Orange growing districts they usually appear about January and February. Spray with benzole emulsion, pine spray or tar-impregnated water.

#### The Mussel Scale.

The young of this scale, which is found chiefly on Apple, but also on Pear, Currant, Plum and Hawthorn, are now to be seen on the trees. The scale damages the trees by sucking out the sap by means of a long, flexible mouth, which it inserts into the plant tissues. It occurs on the trunk, branches and fruit.

To destroy young scales spray with nicotine sulphate, pine spray, black leaf 40, or benzole emulsion. Fumigation is also recommended.

**San Jose Scale, Red Scale, Olive Scale, Soft Brown Scale of Lemon and Orange,** apply same remedy as for Mussel Scale.

**The Light-brown Apple Moth** is particularly destructive to late Apples such as Yates. See "Fruit World," January, 1926.

**Codlin Moth, Painted App'e Moth, Loopers (Moths),** see "Fruit World," January, 1926.

#### 1924 APPLES MARKETED JULY, 1925.

The sale of a carload of 1924 Wine-sap Apples in Glasgow, Scotland, on July 28, 1925, is noted as a triumph of scientific handling, storing, and transporting of Apples from the Pacific north-west, by Edwin Smith, of the Federal Bureau of Agricultural Economics, who has been studying fruit markets in Europe. These Apples arrived in Scotland after the 1925 crop from Australia and New Zealand had been practically cleaned up and sold for good prices, averaging nearly four times as much as the price paid for

1925 Portuguese Apples sold on the same day.

The Apples were wrapped in oiled paper, placed immediately in cold storage at the proper temperature and held under good storage conditions at Yakima until shipped. They were loaded in a fully iced refrigerator car, and transferred to the refrigerator chambers of the steamship at New York.—California Cultivator.

#### A SELF-SUPPORTING EMPIRE.

We acknowledge having received from the Self-Supporting League of Great Britain, a well written booklet entitled "Everyone an Empire Builder,"—compiled by Mr. L. St. Clare Grondona.

The writer urges that Great Britain should not import such huge quantities of manufactured goods, but should import food products from the Dominions who in turn should receive British Manufactures,—at least until such times as the Dominions themselves develop their own manufactures. The booklet throughout is very interesting, price 6d., obtainable from the Self-Supporting League, Polebrook House, Golden Square (near Picadilly Circus), London, W.I.

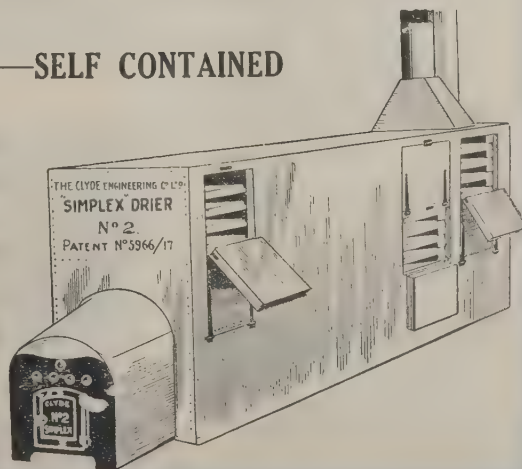
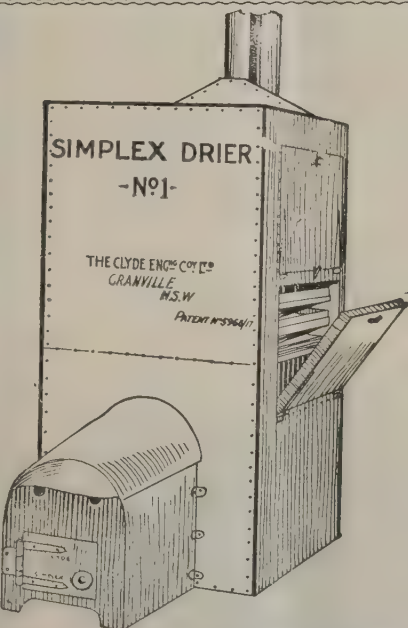
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Made in Sizes to suit  
Householders  
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## The Latest Dehydrator.

The "Little" Equipment is Highly Appreciated by Murray Valley Growers.

**E**FFICIENCY in operation, together with economy in construction, are the keynotes of the "Little" dehydrator, which has become popular in S. Australia (where it was invented) and in other parts of Australia.

The "Little" dehydrator was constructed mainly to deal with vine fruits, and to be supplementary to sun drying—not to undertake the whole process of drying the green fruit from the dip. It is a "finishing off" process.

The principle is that of drying the fruit by means of hot air, operated

by induced draught, thus doing away with the necessity for engine and fan. The furnace is of special design, practically indestructible. By means of cones and baffle plates the hot air is introduced into and regulated in the drying chamber. The difficulty of obtaining an even flow of hot air through the drying chamber is overcome by a conical outlet, where baffle plates are used; thus an equal suction from all quarters, top, bottom, and sides, is assured. With quite a small fire a temperature of 160 deg. is quickly obtainable if desired: the temperatures successfully used last season for drying ranged from 120 to 135 deg.

The costs of erection are very reasonable. Fuel costs are low: Apricot pits were used last season for fuel: about 3 cwt. of wood will "finish off" a ton of fruit. The quality of the finished product is superior, and there is this added advantage—the dried fruit grub is exterminated. Further, the grower possessing a "Little" dehydrator needs much less rack space for the initial drying operations—as the fruit can be handled at a much earlier stage than when no "finishing off" plant is available.

The plant is suitable in design for small or large growers. It is suggested that for economical working, groups of growers should co-operate in running one of these dehydrators. The "Little" dehydrator is so constructed that additional sections can be added to accommodate larger quantities. The initial unit is designed for use on the average vineyard of the returned soldier grower.

The "finishing off" process can be completed in 24 hours, where adverse conditions are experienced: in actual normal practise the work is done in 16 hours.

Full information will be gladly supplied by the patentees and manufacturers, Messrs. Little Bros., of Renmark, S. Australia.

## MURIATE OF POTASH.

### Successful Tests at Renmark.

Mr. F. J. Olorenshaw is Renmark's champion for the use of muriate of potash. He has been using it consistently for the last 20 years and more, and claims to have achieved excellent results from its use on blocks of varying soil conditions (states the "Murray Pioneer"). He is recording results from dressings of varying strengths applied to vines and Orange trees on behalf of the French Potash Company. Members of the Irrigation Trust, in the course of a recent inspection, had occasion to stop close to Mr. Olorenshaw's Orange orchard, and were regaled with samples of his fruit. This was found to be extremely juicy and of delicious flavour. "That's what muriate does," said the owner of the block and dispenser of the fruit.

At the meeting of the Renmark Bureau the Secretary was instructed to send a letter of thanks to the French Potash Company for their donation of 5 cwt. of potash for the pruning competitions. Mr. Olorenshaw stated that the donation was worth about £5. Mr. Leith Napier, who had made it, had left the winner to choose either sulphate or muriate of potash. The muriate was the cheaper of the two, but the winner, Mr. Niehus, had chosen this in preference to the sulphate, and he (the speaker) thought Mr. Niehus had chosen wisely.

The Agricultural Department have hitherto discouraged the use of muriate on the river lands because of the salt which it leaves in the soil, but Mr. C. G. Savage, Deputy Horticultural Instructor, at a recent bureau meeting at Barmera, stated that the muriate would probably be safe enough on well drained land.

## FRUIT TREES ALONG ROADS.

The Roads Improvement Act, which received Royal assent in England in September, gives power to the Minister of Transport and the local authorities to have trees planted along roads maintained by them.

The "Daily Mail," of London, urges the planting of fruit trees as being both beautiful and useful. The habit of planting them along public roads is in common use on the Continent, and has worked satisfactorily. The public soon learn to leave the fruit alone, and the revenue derived is of substantial benefit to the community, while the blossom in spring makes a charming picture.

## "GREEN CROSS" Arsenate of Lead .. Powder ..

For  
Wet Spraying or Dry Dusting

DOES NOT BURN  
or  
WASH OFF.

Mixes instantly and remains uniformly suspended in Spraying Tank.

1 lb. of Green Cross Powder is equal to from 2 to 3 lb. of the best Arsenate of Lead Paste.

25 lb. Drums . . . 1/10 per lb.  
50 lb. " . . . 1/9½ " "  
100 lb. " . . . 1/9 " "  
200 lb. Barrels . . . 1/8 " "

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## THIRTY SEVEN POUNDS—TEN SHILLINGS

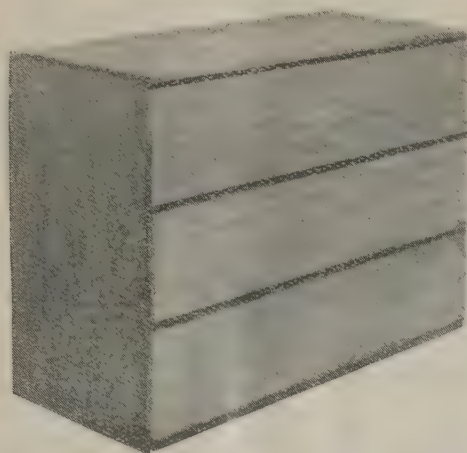
is what it would cost you in postage alone to send a circular to NINE THOUSAND Fruitgrowers throughout Australasia. For One-Tenth of that amount, or £3/15/- you can place a half-page advertisement before those growers by advertising in the "Fruit World."

Send your copy for the next issue to the

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8 Bridge St., Sydney, and  
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Australian Apple and Citrus Dump Bushel Case.

## SOME ADVANTAGES IN FAVOR OF IMPORTED CASES

- (1) Full drawback of duty allowed on all cases exported.
- (2) 1/3rd less freight than on Hardwood cases.
- (3) 25% rebate on rail freight for full trucks.
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- (5) Every piece of timber fit and ready for use, thereby eliminating waste.
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*Cheaper than hardwood if exported.*

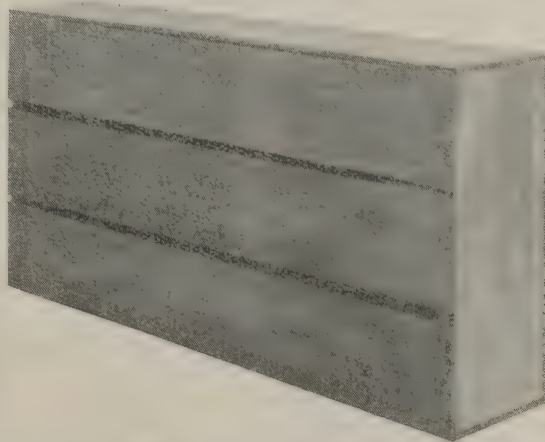
*Cut to Australian Standard Sizes*

DUMP BUSHEL with one piece top and three equal piece side

UPRIGHT BUSHEL with one piece top and three equal piece side

DRIED FRUIT CASE with one piece side and two equal pieces tops and bottoms

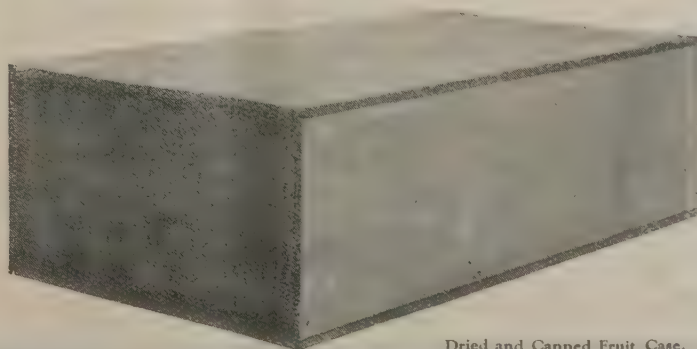
CANNED FRUIT with one piece side and two piece tops and bottoms



Upright Bushel Case with Centre Partition.

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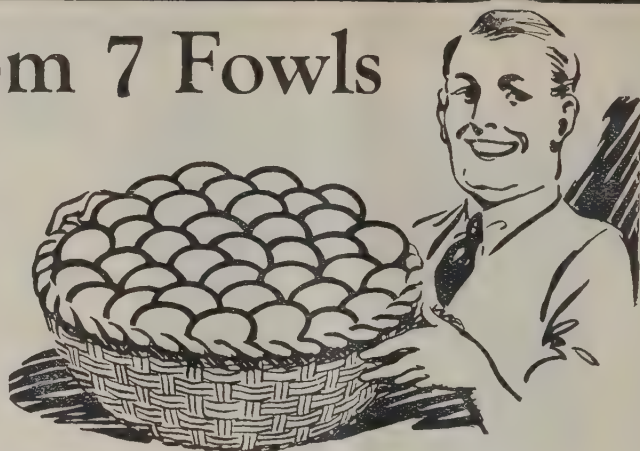
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ADELAIDE



# 154 Eggs from 7 Fowls during . . February.

♦ ♦ ♦



**S**PRIGHTLY, in good health, and laying an average of 22 eggs each in a 28-day month—and that month the worst of the year. Aren't fowls worth owning when they can put up a performance like that? While it is a performance that every poultry owner would like his fowls to emulate, it has been achieved in a purely natural way without in the least forcing the birds. This latter phase

is further evident by the fact that the fowls in question were in such splendid health that they were able to lay not only right up to the moulting period, but actually right through it. With such wonderful proof, isn't the value and superiority of "Karswood" Poultry Spice (which contains dried and ground insects) definitely established; isn't it worth giving a trial? The price is a half-penny a day for 12 birds.

## Laying All Through the Moul.

"Just a line over again thanking you for the way your Spice is doing good in my fowl yard. You published my letter in "Poultry," 4/4/25, also in the "Daily Telegraph" on Anzac Saturday, 25/4/25, and again in the "Sydney Morning Herald" last Saturday, and I must thank you very much, as I received several replies for the roosters which were in the foot note and, of course, the first one to arrive was for all four of the birds, and I sent them along right away, and since then have sent three more to another place, and now I have none left for sale. So if you publish my letter again please omit the roosters. Since writing you in January, my monthly egg book has shown the following results:—January, 173, February, 154; March, 54; April, 39; May, up to the present date 18th, 31. So you see all through the moult, I have been getting eggs."

(Signed) R. H. HOWE, Dryden St., Campsie.



## Eighteen Eggs a Day.

"Some time ago, you recommended to me "Karswood" Poultry Spice. I have used it this season, and enclose results from August 1st to end of last month, thirty birds only. I think the results are good, giving an average of nearly 18 eggs per day for the eight months. If of interest, you might pass this result on to Mr. Parker. (Included in the 30 birds were five very old birds, the bulk of eggs being laid by the 24 birds)."

|                         |          |
|-------------------------|----------|
| August, 1924 . . . . .  | 313 eggs |
| September . . . . .     | 582 "    |
| October . . . . .       | 692 "    |
| November . . . . .      | 674 "    |
| December . . . . .      | 671 "    |
| January, 1925 . . . . . | 580 "    |
| February . . . . .      | 413 "    |
| March . . . . .         | 404 "    |

Total . . . . . 4329 "

(Signed) C. LEWIS, Beaufort, Vic.

## NOTE THE ECONOMY.

- 1/- packet supplies 20 hens for 16 days.
- 2/- packet supplies 20 hens for 32 days.
- 13/- (7lb. tin) supplies 140 hens for 32 days.

## SUPPLIES.

"Karswood" Poultry Spice is obtainable from all Stores and Poultry Food Suppliers at the following standardised prices:—

|                                    |      |
|------------------------------------|------|
| $\frac{1}{2}$ lb. packet . . . . . | 1/-  |
| 1 lb. " . . . . .                  | 2/-  |
| 7 lb. tin . . . . .                | 13/- |
| 14 lb. " . . . . .                 | 25/- |
| 28 lb. " . . . . .                 | 48/- |

If your local dealer cannot supply you, write direct to Messrs. Henry Berry & Co. Pty. Ltd., 380 Collins St., Melbourne, adding postage (6d. on half-pound packets and 9d. on one-pound packets)—to above prices.

## Poultry and Beekeeping

### Poultry Keeping.

#### Care of the Pullets: Precautions Against Colds.

**N**OW that the great majority of the young stock will have attained an age when they do not require constant attention, an opportunity is provided for getting the plant in good order for the winter season. Every care should be taken to make the houses where the young pullets are to be placed later fit to receive them, so that they will not have any setback (writes Mr. F. C. Brown, Chief Poultry Instructor in the N.Z. "Journal of Agriculture.") The houses should be thoroughly cleaned, sprayed with a good disinfectant, and otherwise made as sweet and comfortable as possible. Not only should they be free from vermin, but special attention should also be taken to prevent, in every possible way, the young birds from catching colds—the common ailment when cold autumn snaps are experienced.

In handling artificially reared chickens, which have been brought up under practically hot-house conditions, special care must be taken throughout all stages of their development. Thousands of pullets every season are either lost, or fail to lay when expected

#### by reason of colds

due to improper treatment on the part of their owners. The great weakness in this connection is that the average poultry-keeper gives too much consideration to the question of curing colds rather than to preventing them.

Prevention is better than cure. Protect the pullets from extremes of weather. The house must be roomy, so that the birds can be fed inside in wet weather and fed early in the evening, so that they will not be moping about with wet plumage, waiting for their evening meal thrown down in a muddy yard.

Where colds have given trouble in the past the poultry-keeper must straightway take several measures if they are to be avoided in the future. He must first of all study his local conditions. Having proper housing designed on the deep open-fronted system, the next important point is to see that the houses are free from draughts, and that the birds roost in comfort. This implies no cracks in the side or back walls, allowing a draught of air between the opening in front of the house and the walls. Too often poultry-keepers take no notice of a few cracks in the partitions dividing the houses. This is a mistake, as colds can often be traced to neglect in this way. Unless the intersecting walls are draught-proof,

they should be made so with some airtight material, such as cheap roofing-material, etc.

The deep lean-to house with front partly open is now generally adopted, and rightly so, but the question of how much of the front of the house should be left open to provide ventilation is a matter that can be decided only according to the prevailing local conditions. Generally a space of 3 feet is allowed, but experience goes to prove that where the plant is located on a bleak situation, this amount of space must be reduced if colds are to be prevented. Especially does this apply where the perches are placed high above the floor. Some people go so far as to have an opening in both the front and back walls as a means of providing plenty of ventilation. Unless, however, the site is a well-sheltered one, and mild climatic conditions prevail, colds are almost sure to appear where young stock are concerned.

Good ventilation is an essential requirement for feathered stock of all ages, but it can be easily overdone with the artificially produced young pullet. It is a mistake to conclude that because adult birds keep free from colds in an over-ventilated or draughty house, the growing pullet will do likewise. This does not mean that the pullets should be coddled, but rather that they should be intelli-

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FIVE  
NIGHTS

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WINES . . . . . February 23rd  
HORSES (except Trotting Events) . . . . .  
February 27th  
HORSES (Trotting Events) . . . . . March 4th  
CATTLE . . . . . March 1st  
PIGS . . . . . March 1st  
POULTRY - - - March 2nd

EGGS . . . . . March 2nd  
PIGEONS . . . . . March 3rd  
CANARIES & CAGE BIRDS . . . . . March 3rd  
DOGS . . . . . March 4th  
DAIRY PRODUCE (except Export  
Classes) . . . . . March 5th  
AGRICULTURE - March 5th  
(Including Fruits, Apiculture & Cookery)

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G. C. SOMERVILLE,  
Secretary.



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The Hub of the Motor Industry of  
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gently handled. For instance, poorly ventilated quarters should be always guarded against, as in these the birds become overheated by night, making them susceptible to chill when they get out of doors in the morning. Then, again, in order to resist colds the pullets must not be overcrowded. Above all things, they must be kept in good condition by proper feeding and general common-sense management.

The first symptom of colds is sneezing, with a watery discharge from the nostrils and eyes. Colds are the forerunner of roup. If the breath becomes offensive, and a swelling or a cheese-like substance protrudes from the eye, it indicates that the cold has developed into roup. A cold may be treated successfully, but once the roup stage has been reached, it will usually pay to destroy the bird at once rather than attempt to doctor it. With colds and roup, the best advice is to prevent them, but if the birds become affected the cause should be sought and at once remedied.

A simple method of treatment is to

take a shallow dish, fill it with pure kerosene, and dip the bird's beak in this sufficiently deep to cover the nostrils. Hold the bird in this position until it breathes. This will have the effect of drawing the kerosene to the seat of the trouble. Repeat the treatment on alternate days until a cure is effected. In applying this treatment care must be taken to prevent the kerosene from getting on to the face of the bird, as it is apt to have an injurious effect. The nostrils should be covered and no more, while the dipped parts should be wiped with a dry cloth after each operation.

It would again emphasise that the aim of the poultry-keeper should be to prevent even a slight cold from making its appearance, by removing all sources favourable to its development. It should be remembered that the curing of colds involves considerable labour, and that even when a cure is effected the trouble is likely to recur at any time unless the cause is removed.

## Bee-Keeping Notes.

Every orchardist should be able to keep a few hives of bees, which will furnish a substantial return for a minimum of effort.

Italian bees will find enough suitable flora in most districts to work over a 2-mile radius.

From 6 to 12 colonies should not be too much for the average orchardist to attend to in his spare time.

If any swarms of wild black bees are captured, an Italian queen should be purchased and introduced into the colony after removing the black queen.

Italian queens can be obtained from breeders for about 6/- each. They are sent through the post in specially constructed cages.

Frame hives should be used. These must be square, and 19 inches long x 9½ inches deep. The inside should then be long enough for the frame to fit in loosely.

The quantity of honey produced by a colony will depend on the variety of the bees and the flora within their range.

There is always a good demand for comb honey, and this is the best way for beginners to dispose of supplies.

Small frames are used for this purpose. They are 8 x 8 inches square, and are secured inside the larger frames with the aid of thin wires fixed round the top bars. When the small frames are full of sealed honey-comb, each one will contain from 3 to 4 lbs.

If the large frames are used, the honey-comb can be cut out with a warm knife into squares of 1 to 2 lbs. in weight.

Wrap the honey in the comb in glazed butter paper, through which the honey will not soak.

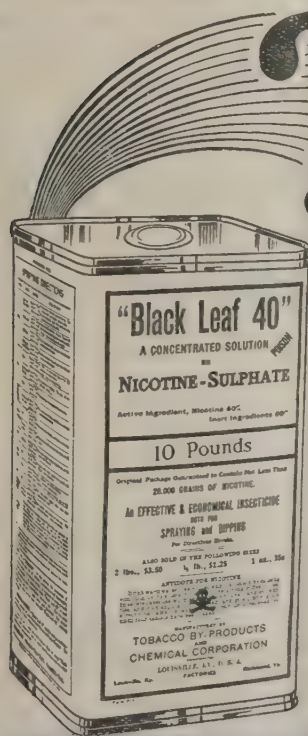
Bees will produce more comb honey in shallow low frames than in any other way.

More honey will be secured by the use of an extractor, but the price will only be about half that obtained for comb honey.

Although the bees will build their own combs, they will produce from 70 to 100 per cent. more honey if a sheet of foundation is attached to each frame. These are obtainable from any apiary supply store.

## CURATIVE HERBS.

Everyone who has read the "Harvester," that charming book by Gene Stratton Porter, will know how largely herbs are used for curing human ills. As a matter of fact, many old and reliable Herbal remedies are still in use in a restricted way. That is because a thorough knowledge of how to prepare them is the difficulty. T. A. Dickson, Pharmaceutical Chemist, Geelong, makes a specialty of his A.M.S., a pure herbal extract which quickly and effectively cures Indigestion and all Stomach and Liver troubles. Price, 3/- or by post, 3/6, at all chemists and country store-keepers.



Protect your fruit and rid your orchard and garden of Aphis and similar destructive insects at a cost of only a few cents a tree. "Black Leaf 40," the "Old Reliable" nicotine spray, is recommended by Agricultural Colleges and Experiment Stations. Spray singly or in combination with solutions for scale, codling moth and other orchard pests.

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Tobacco By-Products and Chemical Corp.  
Incorporated

Louisville, Ky., U. S. A.

Kills  
Aphis

**"Black Leaf 40"**  
40% Nicotine



# The Fruit Trade

## Market Reports and News Items.

### REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS, Advertising in this Journal.

#### NEW SOUTH WALES.

##### Sydney.

Chilton, F. City Fruit Markets.  
Greenberg, S. & M. Fruit Markets.  
Jenkins, John, Fruit Exchange.  
Louey Pang & Samuel Wong Ltd.,  
Thomas St., Haymarket.  
Rule & Beavis, Fruit Exchange.

##### VICTORIA.

##### Melbourne.

Coastal Farmers' Co-op. Society, Western Market.  
Colombie, H. G.  
Cave, F. & Co., Melbourne.  
Davis, J. Western Market.  
Dennys, Lascelles Ltd.  
I.F. & M. Co. Ltd.  
Lister, G., Western Market.  
Millis, A. & Sons, Western Markets.  
Mills, J. B. & Co., 9 Queen St.  
Mumford, J. G., 449 Flinders Lane.  
Pang & Co. Ltd., H. L., Little Bourke Street.  
Silbert, Sharp & Davies, Western Markets.  
Stott & Son, T., Western Markets.  
Tim Young & Co., Western Market.  
Vear, F. W., 49 William Street.  
Wade & Co., H. M., 471 Flinders Lane.  
Wooff, G., Western Market.

#### QUEENSLAND.

##### Brisbane.

Barr, A. S., Fruit Exchange.  
Collard & Mackay, Fruit Exchange.  
Cookley & Co., Fruit Exchange.  
Finlayson & Son, Fruit Exchange.  
Geeves, H. V., Fruit Exchange.  
Robsons Ltd., Fruit Exchange.  
W. J. Whitten & Co., Fruit Exchange.

#### TASMANIA.

##### Hobart.

Jones & Co. Ltd., H., Fruit Exporters.  
Port Huon Fruitgrowers' Assoc.  
Peacock & Co., W. D., Fruit Exporters, and at London.

##### Launceston.

Bender & Co. Pty. Ltd., 110 Elizabeth Street.

#### WEST AUSTRALIA.

##### Fremantle.

Simper, H. J. & F. Ltd.

#### SOUTH AUSTRALIA.

##### Adelaide.

Silbert, Sharp & Bishop Ltd.

#### NEW ZEALAND.

##### Auckland.

Radley & Co. Ltd., Fruit Auctioneers.  
Turner & Growers Ltd., City Markets.

##### Dunedin.

Co-operative Fruitgrowers' of Otago Ltd.

Paterson, Thos., & Co., Vogel Street.

Reilly's Central Produce Mart.

#### ENGLAND.

##### London.

Bradnum, Jas.  
Dennis & Cooper Ltd.  
M. Isaacs & Sons Ltd.  
Jacobs, B. & Sons, Covent Garden  
Joel, R., & Sons, 16, 17, 20 Russell St., Covent Garden.  
Margetson & Co. Ltd., Covent Garden.  
Monro, G., Ltd., Covent Garden.  
Poupard, T. J., Ltd., Covent Garden.  
Ridley, Houlding & Co., Covent Garden.  
Springer, Barney.  
Swann & Co., 3 Salter's Hall Court.

##### Hull.

White & Son Ltd.  
B. & J. Shaw.

##### Bristol.

Bristol Fruit Brokers Ltd.

##### Liverpool.

Adam, James, Son & Co., 1 Temple Court.

MacGeorge & Jardine.

##### Poventry.

Boswell Bros. & Davis.

##### Manchester.

North of England Fruit Brokers Ltd.  
—Australian Agent, N. V. Wade, 8 Bridge St., Sydney, N.S.W.

##### Southampton.

Bristol Fruit Brokers Ltd.

##### Newcastle.

B. & J. Shaw.

#### WALES.

##### Cardiff.

Connolly, Shaw & Co.

#### SCOTLAND.

##### Glasgow.

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Algemeene Vruchten Import Maatschappij.

#### DENMARK.

##### Copenhagen.

Kobenhavns Fugtauktioner.

#### GERMANY.

##### Bremen.

Fruchthandel, Gesellschaft.

##### Cologne.

Algemeene Vruchten Import Maatschappij.

##### Hamburg.

A. Heimer, P. H. & Son., Fruchthof.  
A. Heimer, Vruchten Import Maatschappij.  
Lutten, J. H., & Co., Hamburg.  
Stier, Aug., Fruchthof, Repr. J. B. Mills & Co., 9 Queen St., Melbourne.

## British and Australasian Market Reports.

### Great Britain.

London (19/12/25).

Gerald Da Costa, Covent Garden, London, reports under date 19th December, 1925, prices as follows:—

Liverpool.—Oregon and Washington Apples: Newtowns, 11/6, 16/6; Jonathans (according to conditions), 8/-, 15/9; Rome Beauties, 10/9, 12/9; Delicious, 8/-, 10/9.

Manchester.—York Imperials, 28/6, 36/-; Winesaps, 28/-, 29/6; Newtowns, 12/-, 17/-.

Hull.—Washington Newtowns, 12/6, 14/-.

London.—Virginian Apples: York Imperials, 29/-, 34/-; Ben Davis, 18/-, 23/-; Washington Newtowns, Fcy. and ex. Fcy., 15/6, 17/-; Winesaps, Ex. Fcy., 13/6, 14/6; British Columbian Apples: Jonathans, Ex. Fcy., 14/6, 16/-; Jonathans, Fcy., 13/6, 14/6.

The Department of Agriculture, Ottawa, Canada, reports under date 30th November, 1925, prices ruling at the following centres:—

Glasgow.—Apples: Baldwins, No. 1, 20/- to 21/3; No. 2, 20/3 to 22/3;

Baldwin, Fcy., 8/9 to 9/3; "C," 8/9 to 10/9; Spy, Fcy., 9/6 to 9/9.

Southampton.—Apples: Virginia York Imperials, No. 1, 30/- to 36/-; Ben Davis, No. 1, 19/6 to 22/3.

Hamburg.—Apples: Jonathans, Ex. Fcy., 10/9 to 14/6; Fcy., 10/9 to 13/9; Grimes' Golden, Fcy., 12/-.

Cardiff.—Apples, Blenheims, No. 1, 19/6 to 30/-; No. 2, 17/6 to 22/6.

London.—Ribston, No. 1, 15/6 to 17/6; No. 2, 14/6 to 16/6; Cox's Orange, Ex. Fcy., 15/6; Fcy., 13/9.

\* \* \*

### New South Wales.

Sydney (21/1/26).

Mr. F. Chilton, City Fruit Markets, reports under date 21/1/26:—

During the past week a steady demand has existed for all classes of choice fruit. Pines have advanced in value, while Peaches, Pears, and Tomatoes have declined owing to increased supplies coming forward.

Queensland Fruits.—Bananas, 14/- to 25/- per case; Pines, smooth leaf, 14/- to 16/-; Pines, Ripley, 7/- to 11/-. New South Wales Fruits.—Bananas, 14/- to 25/- per case; Lemons, 2/6 to 10/- per bushel case; Oranges, Valencia, 7/- to 13/-; Eating Apples, Carrington, 2/6 to 12/-; Extra Choice, 16/- to 20/-; Cooking Apples, Mobb's Royal, etc., 6/- to 11/-; Pears, W.B.C., 6/- to 9/-; Passions, 4/- to 9/- per half-case; Tomatoes, 2/- to 6/-; Plums, Japanese varieties, 2/6 to 12/-; Plums, dark, 3/- to 7/-; Peaches, 3/- to 7/-; Nectarines, 3/- to 9/-; Grapes, Black Hamburg, 10/- to 16/-.

Victorian Fruits.—Apples, W.F., 8/- to 15/- per bushel case; Lemons, 7/- to 11/-; Pears, W.B.C., 7/- to 9/-; Peaches, 7/- to 12/-.

Tasmanian Fruits.—Apricots, 3/- to 6/- per half case.

\* \* \*

### Victoria.

Melbourne (28/1/26).

The following are the prices ruling at the Western Market:—Apples, choice Gravenstein, 7/- to 11/- per case; Williams' Favorites, 3/- to 7/-; good cooking, 4/- to 6/-; Pineapples, Queens, choice, 10/- to 13/-; Ripleys, 8/- to 10/-.

Bananas, choice, 16/- to 24/-; other grades, lower.

Oranges, Valencias, special well colored, 14/- to 20/-; Lemons, 4/- to 6/-; Plums, choice large, 5/- to 6/-; others, from 2/6; Apricots, "A's," 8/- to 10/-; "B's," 6/- to 7/-; Pears, "A's," 5/- to 7/-; "B's," 4/- to 5/-; Peaches, "A's," 7/- to 9/-; "B's," 5/- to 6/-; Tomatoes, best Bendigo, "A's," 16/- to 18/-; "B's," 12/- to 14/-; other grades, 9/- to 11/-; Nectarines, best large, 6/- to 8/-; Passion-fruit, Sydney, 10/- to 14/- half-gin case.

**South Australia.****Adelaide (28/1/26).**

Bananas, 20/- to 30/- a crate;  
Apples, cooking, 4/- to 6/-; eating,  
4/- to 8/-; Lemons, 4/- to 8/-;  
Oranges, 12/- to 14/-; Navel, from  
14/- to 20/-; Pineapples, 20/-; Apri-  
cots, 8/- to 10/-; Plums, 4/- to 6/-;  
Peaches, 8/- to 12/-; Nectarines, 12/-  
to 14/-.

**Queensland.****Brisbane (16/1/26).**

Lemons, 4/- to 6/-  $\frac{1}{2}$  bushel case;  
Papaws, 3/- to 5/- a tray; Pineapples,  
rough leaf, 4/- to 5/- a case; 6d. to  
3/- a doz.; smooth leaf, 1/- to 5/- a  
doz.; 3/9 to 6/- a case; Passion-fruit,  
prime, 4/- to 6/-  $\frac{1}{2}$  bushel case; others,  
26 to 3/6; Peaches, prime and choice,  
5/- to 8/-; others, 2/- to 4/6; Plums,  
prime and choice, 5/- to 9/-; others,  
2/- to 4/-; Apricots, 7/- to 10/-; Nec-  
tarines, 3/- to 8/-  $\frac{1}{2}$  bushel case;  
Apples, cooking, 4/- to 8/- bushel  
case; 2/- to 2/6  $\frac{1}{2}$  bushel case; Apples,  
eating, 10/- to 13/-; Grapes, black,  
3d. to 5d.; white, 2d. to 4d.

**West Australia.****Perth (19/1/26).**

Apples, new season, best dumps,  
10/- to 14/-; flats, 8/- to 11/6; other  
flats, 4/- to 7/-; Pears, Bartlett's,

best, 6/- to 8/3 (a few 11/-); others,  
4/- to 5/-; citrus fruits, Valencias,  
prime flats, 12/- to 16/-; other  
dumps, 9/3 to 12/-; and flats, 8/- to  
11/-; Lemons, prime, 11/- to 18/-;  
others, 6/- to 10/-; Apricots, prime,  
12/- to 18/-; others, 7/-; Peaches,  
prime, 12/- to 21/-; others, 7/- to  
9/-; Nectarines, prime, 11/- to 15/-;  
others, 6/- to 9/- Plums, 6/6 to 17/-;  
others, 4/- to 6/6; Strawberries, 8/-  
to 11/-; Passion-fruit, flats, 5/- to  
11/-;  $\frac{1}{2}$  flats, 4/- to 6/6; Grapes, open  
cases, 6/6 to 11/- (a few 14/-); closed  
cases, 4/6 to 6/9 (a few 8/9).

**New Zealand.****Dunedin (7/1/26).**

Messrs. Reilly's Central Produce  
Mart report prices as follows:—  
Apples, desserts, choice Canadians, to  
18/-; Sturmers, to 10/-; Dougherty's,  
to 12/-; Lemons, Italian, 25/-;  
Oranges, to 18/-; Bananas, ripe,  
choice, to 25/-; green, to 16/-;  
Peaches, 10d.; Apricots, 11d.;  
Grapes, to 4/2; Cherries, choice, to  
2/2; small, to 9d.; Cherry Plums, to  
5d.; Tomatoes, Christchurch, 1sts, to  
1/3; 2nds, to 9d.; locals, to 1/6; Black  
Currants, to 5d.; red, to 5d.; white,  
to 3d.; Strawberries, desserts, 1/-,  
2/2; jam, 7d., 11. per pottle; Logan-  
berries, 11d.

**Classified Advertisements.****Wanted and For Sale.**

Prices for Advertisements under  
this heading are as follows:—

Casual Advertisements, one to six  
words, 2d. per word. Contract Ad-  
vertisements, twelve months, 1½d. per  
word.

**FOR SALE.**

**ORCHARD** For Sale, one of the  
best Apple Orchards on the Morning-  
ton Peninsula. Full particulars from,  
or inspection by appointment.—C. A.  
JONES, Bernleigh Orchard, Hast-  
ings (Vic.).

**EXCHANGE.**

**ORCHARD**, near sea, Exchange next  
autumn for orchard between Mel-  
bourne and Dandenong Ranges, 20  
acres, 15 acres planted, mostly full-  
bearing Jonathans; crop approxi-  
mately 3,000 cases; may be seen on  
trees. Fullest particulars given and  
required.—F. P. FLOYD, Tyabb  
(Vic.).

**Apple Exports to all Parts of the World**

by

**J. G. MUMFORD**

(Established 20 years.)

Can handle your fruit to the best advantage, for the following  
reasons:—

1. Direct representation in all leading overseas ports,  
both in the U.K. and the Continent.
2. Growers have the choice of markets.
3. All overseas representatives are pioneers in the  
overseas fruit trade.
4. Every consignment of fruit is sold on its merits,  
and returns made promptly.
5. All fruit sold by auction and catalog of selling  
prices posted direct by auctioneer to grower day  
after sale.

**GET MORE FOR YOUR FRUIT**

by shipping to any of the following overseas firms through

**J. G. MUMFORD****LONDON.**

M. Isaacs & Sons Ltd. McGeorge & Jardine,  
(Established 1815.) (Established 1877.)

**GLASGOW.**

Russell, Turnbull & Co.  
(Established 1872.)  
Also at Bristol and  
Southampton.

**LIVERPOOL.**

Connolly, Shaw & Co.  
Ltd.

**HULL &**

**NEWCASTLE.**  
B. & J. Shaw.  
(Established 1863.)

**BELFAST &****DUBLIN.**

**AMSTERDAM, ROTTERDAM, HAMBURG.**  
Algemeene Vruchten Import Maatschappij.

**COPENHAGEN.**  
Kohenhams,  
Fugtanktonies.

Wider Distribution means Better Prices and Greater Production.

Consign Your Fruit For Sale in Local  
Markets to

**J. G. MUMFORD**

Fruit Exchange,

**449-451 FLINDERS LANE  
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Branches at—

**WESTERN MARKETS & VICTORIA  
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We supply all classes of  
**ORCHARD REQUISITES,**  
including

Apple Wrapping Paper, White Case Lin-  
ing Paper, Woodwool, Corrugated Straw-  
board for tops and bottom of cases.  
Nails, Paper, Stencils, New Cases (in  
shooks or made up), Second-hand Cases.

Agents for

**LIGHTNING FRUIT GRADER,  
HAVE-U MOTOR SPRAY PUMPS AND  
ENGINES.**



# "CARLTON" Lead is Codlin's doom Cleans the Orchard like a broom !

**EVERY POUND OF "CARLTON" ARSENATE OF LEAD will go further and kill more grubs than a pound of any other paste, simply because the "CARLTON" is stronger and better-made than all others**

- 1.—The "CARLTON," as you buy it, is guaranteed to contain 20% Arsenic Pentoxide (the poison). No other gives a guarantee anywhere near this.
- 2.—You obtain 8 or 10 lbs. more solids in every 100 lbs. of the "CARLTON." It contains only about 37% of moisture.
- 3.—It has exceptional suspension qualities, enabling the poison to remain evenly distributed right through the spray.
- 4.—Owing to its extreme fineness it spreads and sticks without the use of a spreader.

**Order "CARLTON" and make sure of a CLEAN Crop**

**F. R. MELLOR, 440 Elizabeth St., Melbourne**

## Special Notice to Fruitgrowers

In response to numerous requests from growers for information as to who are members of the **WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA**, the following list is given. All are members of the above Association, and are registered firms:—

H. M. Wade & Co., 471 Flinders Lane, Melb.  
T. Stott & Sons, 11 Western Market, Melb.  
F. Booth & Sons, 15 Western Market, Melb.  
H. L. E. Lovett & Co., 410 Flinders Lane, Melbourne.  
A. E. Pitt, 12 Western Market, Melbourne.  
J. Davis, 13 Western Market, Melbourne.  
G. Woolf & Sons, 3 Western Market, Melb.  
W. S. Tong, 4 Western Market, Melbourne.  
Silk Bros., 441 Flinders Lane, Melbourne.  
J. G. Mumford, 449 Flinders Lane, Melb.

J. W. Ross, 6 Western Market, Melbourne.  
W. Sweeney, 14 Western Market, Melb.  
J. H. Young & Co. Pty. Ltd., 7 Western Market, Melbourne.  
D. Smith Pty. Ltd., 480 Flinders Lane, Melb.  
Silbert, Sharp & Davies Pty. Ltd., 17 Western Market, Melbourne.  
A. Millis & Sons Pty. Ltd., 5 Western Market, Melbourne.  
W. A. Watkins, 62 King Street, Melbourne.  
P. A. Patrikeos, 31 William Street, Melb.

The whole of the **QUEENSLAND FRUITS** sold in Victoria, is handled by members of the **WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA**, under appointment by the Committee of Direction of Fruit Marketing, Brisbane, Queensland.

**GROWERS PROTECT YOURSELVES** by consigning to members of the **WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA**.

Correspondence is invited by the Association.

J. D. FRASER, Secretary, 325 Collins Street, Melbourne.

**DRIED FRUITS.****Strong Support for A.D.F.A.  
at Berri, S. Aust.**

A.D.F.A. packers in the Berri and Barmera areas have unanimously agreed not to pack any fruit for other than A.D.F.A. agents. It is considered by those interested that this is the most direct way in which packers can assist in removing competitive fruit from off the Commonwealth market (states "The Murray Pioneer"). Last year packers unwittingly assisted certain dealers to secure fruit which was afterwards offered on the Commonwealth market at prices which seriously hampered operations of the A.D.F.A. merchants in their efforts to secure the maximum prices declared.

Packers are of opinion that growers themselves realise that the only solution of the Commonwealth market problem lies in the absolute elimination of the outside fruit, and the packers who have agreed to pack A.D.F.A. fruit only confidently anticipate strong support from growers.

At a well attended meeting of the members of the Berri Co-operative Packers' Union Ltd., held in December, the following resolutions were passed:—(1) That all fruit received by the Union shall be packed and sold under the A.D.F.A. control. (2) That a pool-pack be established, the export proportion of which shall be disposed of through the Overseas Farmers' Federation, and the Commonwealth proportion through other channels to be arranged.

**MANCHESTER CITY AND PORT.**

In a letter to the "Financial Times," the Lord Mayor of Manchester states as follows:—Manchester has been rightly described as the "World's Greatest Workshop." It is the centre of the greatest industrial and commercial area in the world, and is the market city for over 200 towns. It is also the fourth port in the United Kingdom, notwithstanding it is situated 35 miles from the sea. The Manchester Ship Canal, with which the municipality is directly concerned, has enabled Manchester to become a gigantic distributing centre in the heart of England.

Although primarily associated as the centre of the cotton industry, which, under normal conditions, represents in value one-third of the total exports of the United Kingdom, the City of Manchester is also a great engineering centre. In addition, it is actively concerned in many other diversified industries, such as chemicals, rubber, etc.

The banking returns of any city are a fair reflex of its trade, and commer-

*for Economical Transportation***TRUCKS***A New Standard in Values Established***STUDY THESE PRICES:****Commercial Trucks**

(12 hundredweight)

|                    |      |
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| COMMERCIAL CHASSIS | £180 |
| Light Lorry        | £225 |
| Commercial Wagon   | £220 |
| Commercial Van     | £230 |

**Chevrolet Ton Trucks**

|                                            |      |
|--------------------------------------------|------|
| TON TRUCK CHASSIS                          | £200 |
| Lorry with Sides                           | £235 |
| Drop Side Lorry                            | £240 |
| Plain Top Lorry                            | £230 |
| Chevrolet Wagon                            | £265 |
| Chevrolet Van                              | £265 |
| Furniture Van                              | £270 |
| Lee-rolet Type Tipping Truck (metal body)  | £275 |
| Olding Type Tipping Truck                  | £275 |
| Olding Screw-gear Tipping Truck            | £285 |
| Lee-rolet Type Tipping Truck (wooden body) | £260 |

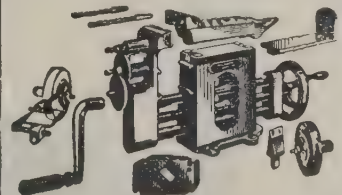
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"If I only possessed the tools  
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Get a

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and do your own  
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**SIX TOOLS IN ONE.**

BENCH VICE, GRINDER DRILL, PIPE VICE, ANVIL, CUTTING HARVEY

See your Ironmonger about it,  
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cial importance. The Manchester returns are second only to those of the City of London. Well served with railways and water and road communications, the city offers opportunities for the establishment of new industries which are unsurpassed in any centre.

Do the right thing at the right time and in the right way; do some things better than they have been done before; work from reason rather than rule; know both sides of a question; be enthusiastic; work for love of work; "do it now"; anticipate requirements; master circumstances; eliminate errors—in short, strive towards all those ideals which, if they were carried out, would make this world a place where competition would be useless.—Marshall Field.

There are only three great universities—the university of work, the university of books, and the university of people. From works, books and folk you get all the education you can ever use.

#### SUBSCRIBERS' PAYMENTS RECEIVED.

The following are the subscriptions received from December 17th, 1925, to January 20th, 1926. If any reader wishes to have a receipt, we will forward same on receipt of further word:—

F. Alvaro (June, '26), F. A. Bloom (June, '26), E. M. Boulton (Feb., '25), E. Bennett (Dec., '26), W. B. Beal (June, '26), J. Brooks (June, '26), H. C. Bray (June, '26), E. G. Burley (June, '26), T. E. Butler (June, '26), A. G. Carne (June, '26), A. Clarke (June, '26), M. E. Crawford (June, '26), J. Croll (May, '27), F. J. Churches (June, '26), W. F. Cooper (June, '26), G. G. Cole and Sons (June, '26), J. D. Carpenter (Dec., '26), W. J. Davis (June, '26), Cox Bros. (June, '26), H. Denham (June, '26), J. Downey (June, '26), J. W. Doyle (June, '26), W. Edge (June, '26), Ervey Bros. (June, '26), Miss Foster (Nov., '26), A. R. Fankhauser (June, '26), Fruit Growers' Assoc. of N.S.W. (June, '26), L. E. Fuicher (June, '26), W. J. Floyd and Sons (June, '26), J. Fuller (June, '26), A. F. Fordham (June, '26), A. G. Gunner (June, '26), G. Gow (Dec., '25), Geo. J. Heane (June, '26), J. T. Hemers (June, '26), R. J. Hannah (June, '26), F. H.

Holland (June, '26), H. Jones (June, '26), H. Kettle (Dec., '25), G. Mock (June, '26), Maley and Lewis (June, '26), M. Moore (June, '26), C. J. McIntyre (June, '26), E. H. Norris (June, '26), T. E. Parker (June, '26), W. J. Quodling (June, '26), W. E. Sargood (June, '26), H. W. Smith (June, '26), J. Smith (June, '26), E. H. Smith (June, '26), Two Bays' Nurseries Pty. Ltd. (June, '25), S. Thomas (March, '26), K. H. Todd (June, '26), L. Turley (June, '26), Westralian Farmers' Ltd. (June, '26), R. J. Watson (June, '26), A. and W. Young (June, '26).

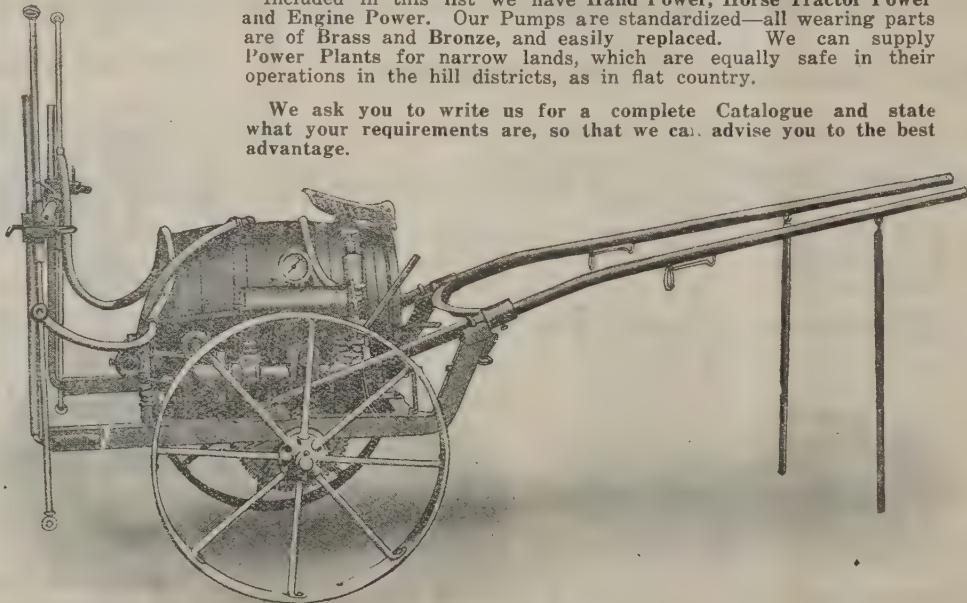
The Castle Hill Show, New South Wales, which will be held on the 19th and 20th February, promises to be the largest yet held. The schedule provides for the following:—Fruit, 80 classes; flowers, 30 classes, and poultry, 80 classes. The Castle Hill Show is reached by tram some five miles from Parramatta, Sydney.

## METTERS NUFREND SPRAYING OUTFITS

We are taking this opportunity of introducing ourselves as makers of SPRAYING OUTFITS as an adjunct to our many other lines. WE HAVE A CATALOGUE OF SPRAY PLANTS which should fill any requirements in the VINEYARD or ORCHARD, also for the BLOWFLY PEST.

Included in this list we have Hand Power, Horse Tractor Power and Engine Power. Our Pumps are standardized—all wearing parts are of Brass and Bronze, and easily replaced. We can supply Power Plants for narrow lands, which are equally safe in their operations in the hill districts, as in flat country.

We ask you to write us for a complete Catalogue and state what your requirements are, so that we can advise you to the best advantage.



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| Grapes                   | Grapefruit            | New Potatoes            | Apples                 |
| Apricots                 | <b>ISLE OF PINES.</b> | Tomatoes                | <b>NEW ZEALAND.</b>    |
| Peaches                  | Grapefruit            | Onions                  | Apples                 |
| Plums                    | <b>BUENOS AIRES.</b>  | Oranges                 | Pears                  |
| Nectarines               | <b>FRANCE.</b>        | Lemons                  | <b>TASMANIA.</b>       |
| Pears                    | Grapes                | <b>PORTUGAL.</b>        | Apples                 |
| Melons                   | Plums                 | Grapes                  | Pears                  |
| Apples                   | <b>FRANCE.</b>        | Apples                  | <b>PALESTINE.</b>      |
| Mangoes                  | Greengages            | Onions                  | Oranges                |
| Persimmons               | Plums                 | Tomatoes                | <b>TRIPOLI.</b>        |
| Pines                    | Cherries              | <b>CZECHO-SLOVAKIA.</b> | Oranges                |
| Oranges                  | Pears                 | <b>ALGERIA.</b>         | Dates                  |
| Grapefruit               | Apricots              | Apples                  | Figs                   |
| Naartjes                 | Apples                | Pears                   | Potatoes               |
| <b>CANADA.</b>           | Peaches               | <b>POLAND.</b>          | <b>CANARY ISLANDS.</b> |
| Apples                   | Melons                | Apples                  | Bananas                |
| <b>NOVA SCOTIA.</b>      | Strawberries          | <b>HOLLAND.</b>         | Tomatoes               |
| Apples                   | Tomatoes              | Tomatoes                | New Potatoes           |
| Cranberries              | Asparagus             | Grapes                  | <b>MADEIRA.</b>        |
| <b>BRITISH COLUMBIA.</b> | New Potatoes          | Lettuce                 | Custard                |
| Apples                   | Onions                | Carrots                 | Apples                 |
| <b>OREGON.</b>           | <b>SPAIN.</b>         | Onions                  | Mangoes                |
| Apples                   | Oranges               | <b>BELGIUM.</b>         | Beans                  |
| <b>CALIFORNIA.</b>       | Lemons                | Grapes                  | <b>AZORES.</b>         |
| Apples                   | Melons                | Strawberries            | Pines                  |
| Pears                    | Apricots              | Peaches                 | New Potatoes           |
| Oranges                  | Figs                  | <b>EGYPT.</b>           |                        |
|                          | Grapes                | Onions                  |                        |
|                          | Greengages            |                         |                        |
|                          | Mandarines            |                         |                        |

**FRUIT**  
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## There is work for a Fordson every month in the year

The progressive farmer to-day realises that the Fordson can make every month of the year a productive month.

Fallowing, cultivating, drilling, harvesting—all this work is easily and quickly done with a Fordson. In the slack seasons, Fordson Power is utilised for wood sawing, chaff cutting, hauling, and every conceivable job on the farm.

Over their period of ownership Fordson farmers express appreciation, and Mr. J. George, of Wickerpin, West Australia, says:—

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Never tiring, costing little to run when working, and no expense when idle, the Fordson Tractor becomes the chief asset on the farm.

Start now and join the ranks of successful farmers who make every month pay.

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Complete with Fenders and Pulley.

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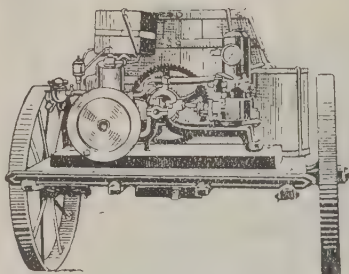
Branches:- All States.



# Effective Spraying means Better Crops and Bigger Profits

You can have the same results as thousands of other growers by using

## The BAVE-U PIONEER AUSTRALIAN POWER SPRAYER



Made in Single and Double Plunges  
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The POWER SPRAYER that has held its own against all comers for the past 15 years

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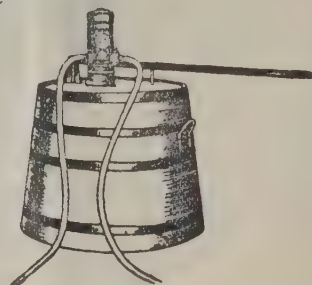
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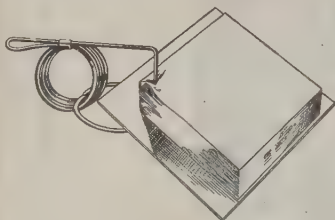
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**FILLS A LONG- FELT WANT**  
Securely holds Wrapping Paper, and is self adjusting, as the sheets are removed.

This was recently invented by Mr. Arthur Croft, Engineer of the Harcourt Cool Stores. That it is a valuable aid to the fruit packer is proved by the large number of growers in the district who are now using it.

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Agents Wanted in All States

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*Do you want to*  
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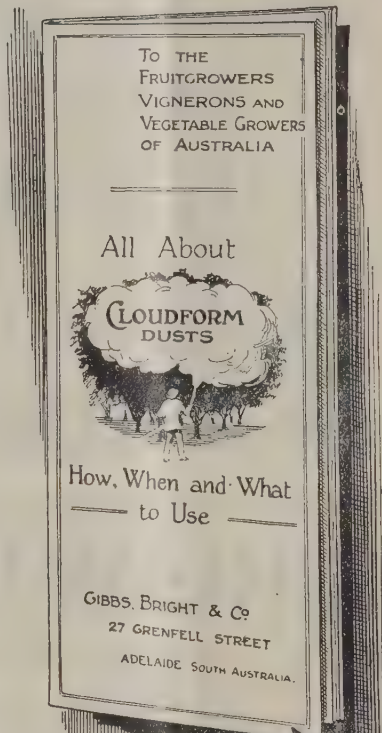
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# J. G. MUMFORD

(Established 20 years.)

Can handle your fruit to the best advantage, for the following reasons:—

1. Direct representation in all leading oversea ports, both in the U.K. and the Continent.
2. Growers have the choice of markets.
3. All oversea representatives are pioneers in the overseas fruit trade.
4. Every consignment of fruit is sold on its merits, and returns made promptly.
5. All fruit sold by auction and catalog of selling prices posted direct by auctioneer to grower day after sale.

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Consign Your Fruit For Sale in Local  
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We supply all classes of  
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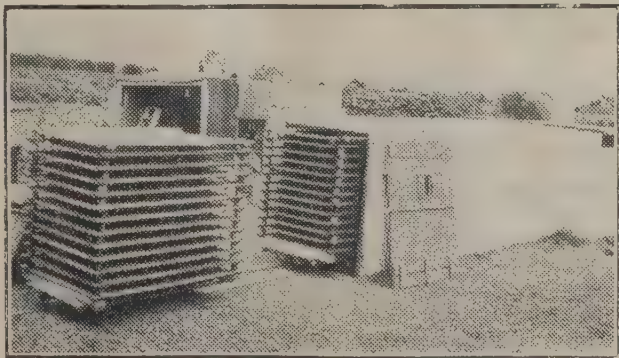
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## Ensure Your Harvest by Dehydration



## LITTLE BROS. INDUCED DRAUGHT DEHYDRATOR

A Perfect One-Man Drying Plant  
Reduces production cost to a minimum  
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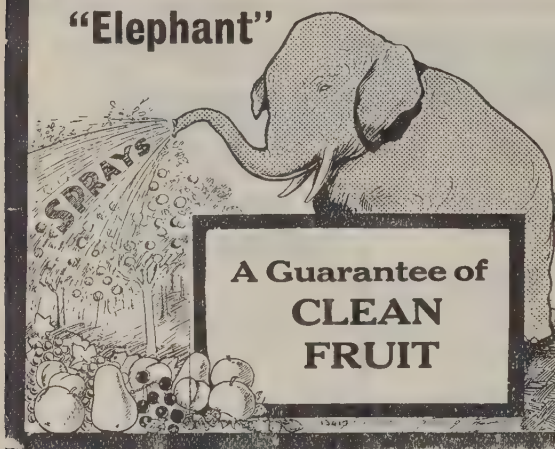
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**Sole Agents: RENMARK FRUITGROWERS CO-OPERATED LTD.**  
**RENMARK, SOUTH AUSTRALIA.**



**"Elephant"****STILL ON TOP!!****ORCHARDISTS**

should use only the best Fruit Sprays,  
therefore ask for and see that you

**— GET —****"Elephant" Brand****— — — —****NOW IS THE TIME TO USE:—****ARSENATE OF LEAD** (PASTE & POWDER)**IF NOT SUPPLIED, PLACE YOUR ORDER NOW.**

To obtain the best results it is necessary to spray thoroughly and frequently with Arsenate of Lead. This takes up considerable time, and is costly. It is therefore all the more necessary to use the Best Brand obtainable. To be sure of this, see that you use "ELEPHANT" BRAND, which has been proved to be not only the most reliable on the Australian market for many years, but the Highest Grade of Arsenate of Lead still obtainable.

Since the Wonderfully fine "ELEPHANT" BRAND ARSENATE OF LEAD came on the market years ago, numerous tests carried out by the various Government Agricultural Departments invariably show that this Brand stands alone. No other brand has shown consistently the very high qualities of "ELEPHANT" Brand. The figures published below speak for themselves,

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**"FRUIT WORLD OF AUSTRALASIA."**

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of each Month.

**Editorial and Management Notices.**

**Articles and Photographs.**—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printer's MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked "Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

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Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

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Changes of copy for advertisements must be in our hands on or before the 17th of the month prior to publication.

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"The Fruit World" Offices (where copies and full particulars are obtainable) are as follows:—

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R. E. BOARDMAN, A.F.I.A., Managing Director and Editor.

E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director: HON. L. M. SHOOBRIDGE, M.L.C.

**Lead Arsenate on Apples.****The Scare Will Pass As It Has Done Previously.**

In order to prevent the possibility of Australian Apples being condemned in Great Britain for having an excess of arsenate of lead, the Federal authorities are taking analyses of the fruit as it comes forward for shipment.

Official tests in Tasmania show that their fruit contains much less than the minimum quantity, viz., one hundredth part of a grain of arsenate per lb. of fruit. Spraying ceased in December, and 2 inches of rain fell in January.

Western Australia, which is not infected with the codlin moth, has no problem in this connection.

Exporters in Victoria and South Australia, knowing the British regulations—which, by the way, have been in force for many years—have taken careful analyses all through, and are only submitting fruit which fulfils the requirements.

This made all the more surprising the action of some of the inspectors in holding up consignments which tests had demonstrated, fulfilled the British requirements. As a consequence, heavy cancellation of booking for export have taken place.

It is understood that British fruit importers are insuring 75 per cent. of the value of the fruit at 10/- per cent., this being a clear indication that the underwriters at least do not consider the risk a grave one.

The "Arsenic on Apples" is a scare pure and simple; it has appeared before as regards other fruits, and it may recur again.

The absurdity of the position was emphasized when Australian papers published cables indicating that the cores of Apples should be removed before shipment. Later the statement was published that the English general public were greatly relieved to hear that no harm would accrue from eating Apples, providing they were peeled and the cores removed.

Clear thinking and a sense of proportion will clear the air and make it possible for fruit growers, distributors, and Government officials to work in harmony, keeping Australia's name good and developing her export trade.

Pennant Hills West,  
20/1/26.

"Thank you for always being so prompt in forwarding the "Fruit World" to me; I appreciate it very much."

(Sgd.) H. C. Franks.

**Personal.**

Mr. A. J. Arnot, whose fine orchard property of 1,000 acres is in the Batlow district of New South Wales, has informed our Sydney office of having just sent in to the Batlow Pack 20,000 cases of Apples and Pears. Mr. Arnot mentions this yield is one of the best seasons he has enjoyed.

The resignation of Sir George Knibbs as Director of the Institute of Science and Industry has been received by the Government.

Dr. Frank McCoy, a dietetic authority, makes the assertion in a recently published article that citrus fruits such as oranges, grape fruit and lemons actually counteract acidosis. He denies that the acids of these fruits have any effect whatsoever in creating this ailing condition. He suggests as a slogan, "Orange Juice Every Day Chases Acidosis Away."

Mr. J. C. McCallum, Manager of the Superphosphate department for Messrs. Gibbs, Bright and Co., Pitt Street, Sydney, paid one of his periodical business visits to Melbourne recently in connection with his firm. Mr. McCallum has since returned to his headquarters.

Mr. A. E. Hyland, Chairman of the Betterment of the Victorian Railways Department, has been appointed Publicity Officer in connection with increasing the sale of Australian goods in Great Britain.

**DISASTROUS BUSH FIRES.**

Bush fires raged throughout various parts of southern Australian mainland and Tasmania during February. In Victoria over 30 lives were lost on "Black Sunday" (14th February). Damage estimated at over £250,000 has resulted. Many orchards were damaged in the Gippsland area.

Fires subsequently broke out around Kinglake and Queenstown. Mr. Otto Muller had his orchard damaged and cool store burnt, damage estimated at £3000.

In Tasmania at one stage the Launceston to Melbourne steamer service was delayed through inability to proceed along the Tamar River because of the smoke.

**Rain Needed.**

In Victoria, owing to the lack of good rainfalls since November, the Apples from non-irrigated orchards are on the small side. The export totals will be much lower than was originally estimated.

Because of hot, driving winds, much fruit has fallen, and various parts of Victoria have suffered regrettable losses.

# New South Wales.

## District Reports. News Items.

(By Our Correspondent.)

### MURRUMBIDGEE IRRIGATION AREA?

Feb. 18, 1926.

**Peaches.**—The Irrigation Commission has notified the Fruitgrowers' Associations that it has decided that the Government cannery should fall in line with other canneries by declining to process the Elbertas after this season. The Commissioner recognises in its communication that the settlers will either have to re-bud these trees or uproot them.

This means a serious loss to the fruitgrower on these areas. As the majority of the Elbertas grown here are aged trees, it would not be advisable to re-bud. The difficulty has, however, to be faced, as the cannery cannot be expected to treat any variety at a serious loss.

On the other hand, the Commission is justly entitled to in some way compensate the settler for the enforced curtailing of his revenue, and this phase of the question I feel sure will not be lost sight of by the Commission. The settler, however, owes a duty to himself to see that this compensating advantage is not even temporarily lost sight of by the Commission.

After all, the cannery and the whole area is a Government undertaking, and the Government would be exercising a wise policy in amply protecting the settler. It must always be borne in mind that from the inception of the scheme the

**Government Informed the Settlers** that the cannery was the market for their fruit, and that the Government, through its experts, advised the settlers to plant Elbertas. Through the cannery being unable to process all the Elbertas grown on the Yanco area, a serious loss has been incurred by some settlers. Many of them who do not take kindly to the drying process have tons of Elbertas laying on the ground, notwithstanding their endeavors to push them on to the fresh fruit market.

It is a gratifying feature that the Clings are likely to bring decent returns to the growers on Yanco. Certainly the aphid has made an attack on this variety, but the spraying orchardists will be well paid for their labor.

Pears are not a success this season, as the moth has made its inroads into them.

Tomatoes are very scarce here, and the cannery can do with a good tonnage, as it cannot anything like reach the fulfilment of its orders for Tomato sauce. Next season, providing the cannery notifies intending growers of its requirements, there will be plenty of Tomatoes.

### Agricultural Show.

This is always a big item in Yanco affairs, and the Irrigation Commissioners are to be congratulated on the keen interest and assistance they put into these shows. Apparently the takings were larger in every way than the previous year, but the terrific heat of the few days preceding the show did not make the entries the success they would otherwise have been. The cannery exhibit got up by Mr. McNally was very replete and interesting. The "one man farm exhibit" by Mr. Edwards was an instruction of the variety of ways a man could put in his time on an irrigation farm.

The Yanco High School also came well to the fore with its high-class exhibit, and we must not forget the excellent exhibit of the M.I.D. Co-operative Company. The dried and fresh fruit exhibits were not considered by many of the visitors to be up to the usual standard of the show.

**Continuity of Operations** of the Government cannery through the whole year is likely to become a burning question on the area shortly. The growers and also the employees have claims to put forward, but above all these, the recommendations of the cannery management in this respect should be especially interesting.

### CANNERY AT GRIFFITH DESIRED

Representing what is stated to be the largest meeting ever held in Griffith, a deputation of fruitgrowers from the Griffith irrigation area waited on the Minister for Agriculture (Mr. Dunn) on the 18th February, requesting that the building of the cannery at Griffith, for which the foundations were laid in 1917, should be proceeded with. Messrs. Denning Dunn, W. Couch and John Thompson stated the case for the Griffith growers.

In reply, the Minister said that a non-paying concern would harm the district, and the proposed cannery could not pay with a capital layout of £120,000, which would be involved by fulfilling the original specifications. He would, however, weigh carefully the possibilities of erecting a cannery on smaller lines. The Minister suggested that the future of the district lay more in the production of Citrus and Vine fruits rather than canning varieties.

### Citrus Export Guarantee.

The Premier (Mr. Lang), at the request of the N.S.W. Central Citrus Association, approached the Commonwealth Government to secure a guarantee of 12/6 per case against losses on exported Oranges. The Department of Markets and Migration, however, has replied to Mr. Lang stating that the maximum amount of guarantee will be 5/- per case of 1-1/3 bushels.

### Neglected Orchards.

It is understood that the Agricultural Department intends taking action against owners of neglected orchards of the Hartley district for non-observance of regulations regarding codlin moth and fruit fly.

### PERMANENT WATER SUPPLIES.

#### Success with Shallow Bores in N.S.W.

Mr. W. F. Dunn, Minister of Agriculture, who is also Chairman of the Water Conservation and Irrigation Commission, in referring to the work carried out by the Commission under its Shallow Boring Scheme, states that it is pleasing to note the many letters of appreciation which have been received from settlers who, under the scheme, have secured a permanent water supply for their holdings.

The vital importance of providing a permanent water supply in connection with holdings not served with water by perennial streams or in localities where the storage of surface water is impracticable or too costly, has long been recognised, and it was with the object of assisting small settlers to overcome this great need that the Commission's scheme was inaugurated over 13 years ago. That this object is being achieved is shown by the fact that up to the present 1,720 bores have been completed, representing 471,045 feet drilled.

The scheme has been in operation in country west of the Dividing Range, and extending from near the Queensland Border at Boggabilla in the North West to near Corowa in the South. Owing to the wide area



covered and the success met with, the scheme has become well known, and the ever-increasing demand for assistance under it affords ample evidence that the liberal terms offered by the Commission are fully appreciated, and that the settlers are also alive to the immense advantage of a permanent water supply, both for the satisfactory working of their holdings and as an insurance against drought.

At present 32 plants are in operation, and in order to cope with the large number of applications received from settlers, three additional plants are now on order, and these will shortly be put into service.

#### THE NORTHERN SUBURBS AGRICULTURAL AND HORTICULTURAL ASSOCIATION, ST. IVES, SYDNEY, N.S.W.

In our last issue appeared a report of the above show, and at the time of going to press we were unable to obtain the names of the various winners in connection with the Fruit, Horticultural and Poultry sections. The following are the names of the winning exhibitors in their respective classes:—

**Fruit Section.**—Apples—Messrs. Schofield, Pierce, C. Rase, Bourke, Steinfeld, McCarthy and Britten.

Collection of Apples—Messrs. H. Britten and G. S. Pierce. Collection of Pears—Messrs. H. Britten and G. S. Pierce. Peaches—W. Dorrington, J. Reid, R. Steinfeld and J. Fagan. Plums—Schofield, Steinfeld, Oliver, Pierce, Fagan and Hensman. **Citrus Fruit**—W. Hensman, Russell, Steinfeld, Gantsrodge, Porter, Dorrington, and H. Britten. **President's Cup**—Best collection of fruit grown in Huringai Shire—W. Hensman, 89½ points; R. Steinfeld, 88 points. Best display of fruit—W. Hensman. Best packed cases—H. Britten, W. Russell, G. S. Pierce, and V. Steinfeld.

**Horticultural Section.**—W. Lutherburrow, H. Britten, R. Thorpe, and J. Denning.

**Poultry.**—Messrs. B. Radford, J. Curry, Haigh, Knight, Gordon, Asher, Bayley, Turner, Lockwood, Clarke, Goodwin, Hardy, James, Hatcher, Metter, Prior, Bourke, Dubois, V. Davis, and Quinn. There were 165 entries in this section.

#### NEW SOUTH WALES.

Information continued on pages 140-151 describing the forthcoming

**ROYAL EASTER SHOW AT SYDNEY.**

## Fruit Grading Regulations.

Amendments Agreed To by Growers at Australian Fruit Council in September are Not Yet Gazetted.

**R**EGRET is freely expressed by growers at the failure of the Federal Customs Department to gazette the amended grading regulations for Apples and Pears, as decided on at the last meeting of the Australian Fruit Council. The amendments to the regulations, as decided by the Fruit Council are as follows:

#### Apple and Pear Grading Regulations.

That this Council approves of the following proposed amendments of Section 47 of the Commerce (General Exports) Regulations 1925 relating to grade standards for Apples and Pears and urges the various State Governments to adopt the standards under those regulations for Australian trade, together with the proposed amendments in order to secure uniformity throughout the Commonwealth:—

That the size requirements of "standard" grade be limited to fruit "not under 2½."

That the "plain" grade be amended to the following:—

Apples and Pears described as "plain" shall consist of Apples and Pears of one variety and one size, free from broken skins and not misshapen, seriously blemished, or injured by any disease, but fruit slightly blemished by rubbing, black spot, fungus or caterpillars may be exported, providing that—

The total area covered by such blemishes on any Apple or Pear does not exceed the area contained in a circle having a diameter of half an inch.

Russetting of the surface shall not be deemed to be a blemish if the skin is unbroken. The diameter of Apples shall not in any case be less than two inches.

That the regulations in force in Victoria and Tasmania regarding the sizing of Apples and Pears be amended as follows, and that it be a recommendation that such sizes be adopted by the various other States—

Apples and Pears must be sized into the following sizes—

2 inches shall include fruit of 2 inches or greater diameter, but less than 2½ inches.

2½ inches shall include fruit of 2½

inches or greater diameter, but less than 2½ inches.

2½ inches shall include fruit of 2½ inches or greater diameter, but less than 2¾ inches.

2¾ inches shall include fruit of 2¾ inches or greater diameter, but less than 3 inches.

"Large" shall include fruit 3 inches or over in diameter.

#### A HEALTHY NATION.

**Fruit is a Necessity, Not a Luxury.**

#### Prominent Dentist's Advice.

The value of correct diet as a means of raising the national standard of health was emphasised by Dr. G. E. Payne Philpots, of Melbourne, President of the Food Education Society, who recently visited Sydney to lecture on the prevention of disease.

"The principles I advocate," he said, "will tend to prevent the carrying-off every year in Australia of 13,000 children under the age of 10 years. What I wish to explain are the same principles as I am following out with my own children. One of my boys, aged 9, has never used a tooth brush in his life, relying, at the end of every meal, on fruit, an Apple for preference, as the best method of keeping the mouth clean."

If all parents provided a correct diet for their children (Dr. Philpots continued) there would be an improvement in national health. If we were to keep the British flag flying on this continent we had to fill our spaces with healthy people. Improper food was causing more disease than anything else. People over-ate, and half of what they ate nourished the body, and the other half caused disease. A child fed correctly to the age of 15 was a healthy citizen. That meant the wiping out of disease. Another important thing was the necessity for the slow, deliberate chewing of food.

"In two generations," he declared, "we can show a marked improvement in children's teeth if a correct diet is applied by replacing white bread and highly refined foods by wholemeal bread, eggs, butter, plenty of fruit, and meat in moderation. Children should have milk to drink at every meal."

# Australian Citrus Growers' Conference.

## Important Meeting at Melbourne.

Local Export Trade Discussed.

Export Deemed Vital—Government Guarantee Needed.

Lemon Growers' Organisation Favored.

**T**HE Annual Interstate Conference of Citrus Growers, convened by the Victorian Central Citrus Association, was held at Melbourne on 3rd, 4th and 5th February. Mr. S. Brentnall (Bamawm) presided. Delegates attended as follows:—

New South Wales.—H. G. Such (Manager, N.S.W. Central Citrus Association), R. Watson (Perricoota), Ross Reid (Leeton), S. P. Taylor (Curlwaa).

South Australia.—J. A. Parkes (Secretary, Murray Citrus Growers' Association).

Victoria.—F. M. Quick (Cobram), T. J. O'Brien (Gonn Crossing), A. Schwennessen (Riverside), J. P. Larkings and J. Lindner (Wangaratta), J. M. Jacobs (Kyabram), P. Rossiter (Ngawe), A. J. Wood (Tongala), Capt. D. Halhed (Mildura), Mr. Rodwell and Mr. Paton (Merbein), A. Fraser Gandie (Nyah), J. R. Gorton (Tresco), P. Cobbett and G. H. McMullan (Bamawm), J. P. Greenwood and D. Murton (Tresco), and B. S. B. Cook (Secretary). W. E. Branson (Market Representative).

Government Officials.—Mr. J. M. Ward (Superintendent of Horticulture), S. A. Cock (Government Citriculturist).

### Official Opening.

In introducing the Minister for Agriculture (Colonel Bouchier), the Chairman said that the industry was worth £4,000,000 to Australia. The industry had stood on its own feet without Government assistance, and the small amount asked for in respect to expert insurance and research work was thoroughly justified.

In opening, the Minister for Agriculture (Colonel Bouchier) congratulated the V.C.C.A. on its successful organisation, which he understood now embraced 80 per cent. of the growers. He wished it were 100 per cent., as it was the small minority outside that gave trouble. In the past the Governments had spent millions on organisation and production, but very little on marketing. It was not the function of the Government to arrange markets, but such assistance as could be given would be rendered by the State Government, to help growers in every possible way. After conferring with Sir Frank Heath, he believed that research matters would be put on a better basis. The marketing organisation of the State Fruit

Advisory Board, though it had been operating only a month, was functioning effectively. Mr. B. S. B. Cook was a good organiser, and the right man for the job. For a six months' campaign the State Government had provided £2000. This would be made a permanent marketing scheme. It seemed that at the present time Australia could consume all the citrus fruits produced, but large areas had yet to come into bearing, and the Government would give all the assistance possible to the export trade. Lemons could be safely sent here from Italy, also Ohanez Grapes from Spain via England, which suggested that the high quality fruit grown in Australia could be safely exported to the Old Country.

### Orchard Levy Promised.

"For some years past," said the Minister, "deputations have waited on different Ministries, urging that an



MR. STANLEY BRENTNALL  
Chairman of the Citrus Growers' Conference

Orchard Tax be brought into operation; others had opposed it. The Parliamentary draughtsman tells me he thinks a Bill can be drawn up—an Enabling Bill—to provide for either a levy on production or acreage tax. Personally I favor a levy on production. This Enabling Bill will operate like the Dairy Supervision Act. The section of the growers which wants a levy can have it, and another section which wants the acreage tax can have that."

A Delegate: "What will the High Court have to say?"

The Minister: "I'm not so sure about that. However, the Bill will be introduced next session. The lines are not yet sufficiently advanced for discussion in detail, but I will do so later with you, if you desire."

In moving a vote of thanks to the Minister, the Chairman urged the continuance from year to year of cold storage experiments with citrus fruits. The overseas carriage was faulty; a systematic series of experiments was needed.

Mr. A. Fraser-Gandie seconded the motion, and urged the payment of a substantial award for the discovery of a process that would make citrus export safe.

The Chairman: The first honest ship's engineer would win it.

### Government Assistance.

The Chairman said that £20,000 needed to be administered by the V.C.C.A. in the same way that assistance had been rendered to the butter, sugar and meat industries. So far, members had stood up to the risks of export. With regard to marketing, the Association needed its own selling floors in London. With regard to the Marston process, the Chairman stated that the results so far were not satisfactory; the experimental shipments were inefficiently supervised by the Institute of Science and Industry. Paying for the option had cost the Association £250. The Bill promised by the Minister for a case levy or acreage tax would be of value. Association growers who were now paying 2d. per case levy would not have a further levy imposed, but it would compel the outsider to pay towards the central organisation.

The Secretary submitted details of the export of Citrus under the Marston process by the s.s. "Jervis Bay." The fruit had been carried in ventilated holds, not in a refrigerated chamber, and was unsatisfactory at Colombo. Temperatures went up to 70 deg. F. Apparently the ship's officers were not sufficiently advised as to the nature of the experimental shipment. The control fruit held on shore also failed.

Mr. H. G. Such said that the report revealed a deplorable condition of affairs. Export was vital. The experimental shipment had been a waste of money. The Marston system might be perfectly good, but the "Hobson's Bay" experiment had proved nothing through lack of scientific methods. The attitude of the New South Wales growers would be to cut their losses on the Marston process.

Continuing, Mr. Such referred to a patent process in America which had



been adopted by 250 packing houses. The rights for which the vendors asked a big sum for Australia. Citrus fruit thus treated had arrived in Australia, and he had never seen better.

Mr. Cock said that neither the Citrus Association nor the Department had anything to do with shipments under the Marston process; the work was solely done by the Institute of Science and Industry.

Mr. Parkes said he was disappointed and grieved at the attitude of the Institute of Science and Industry. In South Australia they had believed in the Marston process they had something of value to the Citrus industry, but the haphazard methods of conducting the recent shipment were an absolute farce. The regrettable part was the failure of the controls, about which further information was necessary.

Mr. Greenwood (Tresco) said that the growers needed a sound proposition, or they could not continue exporting. He was against Government assistance; the growers should do the work themselves, and they would come off far better.

Mr. H. G. Colombie, representing English fruit brokers, said that South Australian fruit was uniformly good on arrival in London. Certain Victorian districts also attained success. He advocated tests to prove the suitability, or otherwise, of producing districts. He believed that the careful picking, sweating and packing of the fruit was of vital importance. Some fruit was doomed to failure before it went on the steamers.

Mr. Larkings said that the handling methods had much to do with the success of export. Fruit of the coarser rind seemed to carry better. His district produced 24,000 cases, and desired to export. The solving of the export problem lay in the careful handling from the tree to the seaboard. Fruit should be handled like eggs. Growers should use picking and packing gloves. A lot of work was necessary in the education of growers.

#### Equalisation Fund.

Mr. Greenwood moved that this conference make representation to the Federal Government with a view to having a sum of money made available to form the nucleus of an equalisation fund in order to return to the growers an equivalent sum on the local market value on the whole of the fruit which is exported, failing which the nucleus of a fund be obtained from the citrus growers in order to protect growers from loss by export overseas. The price to be fixed by the V.C.C.A.

Mr. Such urged that as regards export, growers think in terms of tens and hundreds of thousands of cases. If the growers had covered their expenses they would go ahead with export again. Under the present circumstances export from New South Wales would stop, and the proposed equalisation fund would not be considered.

It was finally decided, on the motion of Messrs. Watson and Halhed—

"That a deputation from this interstate conference of Citrus growers wait on the Prime Minister and place before him the necessity for immediate assistance being extended to the Citrus industry, stressing the urgency of a substantial grant being made to enable export markets to be properly exploited and for other purposes under the scheme prepared by the Federal Council of Citrus growers."—Carried.

Mr. Such moved—

"That following the case put to the Department of Markets and Migration last year, and as an immediate measure of relief, this conference requests the assistance of the Federal Government in the establishment of a fund for the furtherance of the Citrus industry, both to enable better organisation with Australia and to stimulate the successful exploitation of overseas markets. Such a fund to be limited to £5,000 for the coming year, to be allocated as follows:—£2500 for the purpose of setting up an insurance fund and to cover the expenses of overseas marketing; £2500 to be devoted to the necessary research in order that the problems surrounding the successful export of Citrus fruits overseas may be properly and adequately investigated. (2) That the limit of the insurance fund for 1925 to 5/- and the averaging of shipments be considered.

Mr. Parkes seconded.

Mr. Cook said he had received a letter from the Department of Markets and Migration stating the 5/- per case limitation would not be departed from.

The motion was carried.

On behalf of the sub-committee appointed to consider this subject, the Chairman (Mr. Cobbett) reported as follows:—

"After full consideration of the various aspects of the case, the sub-committee unanimously agreed to recommend that a levy of 2d. per case be collected on all Citrus fruits marketed in Victoria ex railways, and that the amount so collected (if possible by the Railways Department), on account of fruit forwarded by the different

States, shall be paid to the V.C.C.A., and that the amounts due to the respective States shall be returned on a pro rata basis to the various central Citrus Associations for the purpose of establishing an equalisation fund for export purposes, or dealt with in such a manner as the respective Associations desire. Lemons to be excluded from the foregoing if found practicable."

Mr. Wood said the levy should not exceed 1d. per case.

Mr. Branson said that the total crop from the V.C.C.A. districts was 268,000 cases Oranges (Navels, Commons and Mandarins); 59,656 cases came from South Australia, also supplies from Leeton and Griffith (between 50,000 and 60,000 cases), the bulk of the trade being from May to November. On an estimated quantity of, say, 300,000 cases, an extra 2d. per case would realise £2500.

Mr. Fraser Gandie said the extra levy of 2d. per case would make it more difficult to gain new members.

Mr. Parkes pointed out that to export a certain proportion would make the prices 1/- per case better on the local market, whereas an excess of even 2000 cases on the local market would reduce the prices considerably.

Mr. Rossiter doubted whether it would be legal to collect the levy in the method suggested, from the Railways.

Mr. Such said his Association tried to keep as much fruit as possible off the Melbourne market.

The report was adopted, on the motion of Messrs. Cobbett and Jacobs.

At the instance of Mr. Paton, of Merbein, a further resolution was carried:—

"That failing an arrangement under which levies can be collected through the Victorian Railways Department, this conference strongly urges that Acts be passed in each of the Citrus growing States to enable levies to be collected on a compulsory basis on all Citrus fruit marketed, and that this resolution be submitted for consideration and decision at the forthcoming conference of Ministers of Agriculture."

Captain Halhed said that Mr. Clapp had just promised him that he would collect on the freight basis if Mr. Catanach would agree, so he saw Mr. Catanach, who expressed the opinion that Mr. Clapp would have difficulty in doing so.

Mr. Rossiter moved that the above proposals did not go far enough, as only fruit from certain districts should be exported. Captain Halhed seconded this.

Mr. Cock said that the present state

of affairs regarding export could not continue. A census was being taken regarding fruit for local and export markets, and quality would be considered. Quality varied from season to season. The matter was being considered at the Conference of Ministers of Agriculture in April. Mr. Rossiter, therefore, withdrew his motion.

#### New Zealand Market.

Mr. Such said he visited New Zealand in June. The average importation of Oranges to New Zealand was 100,000 cases, which were sent from Sydney, Melbourne and Adelaide agents, who bought the fruit or had it consigned to them by growers. The New Zealand market was then com-

market, it would prevent agents from speculating.

Mr. Parkes agreed with the necessity for co-ordinated action, and moved—

"That in the opinion of this conference no fruit should be shipped to New Zealand without the approval of the central organisation."—Carried.

Mr. Cook moved—

"That as the capacity of the market in the South Island of New Zealand is estimated at 2000 cases per week, this conference desires districts of the V.C.C.A. and South Australia who intend to take part in this trade to decide and inform

#### Proposed Export Regulations.

The Secretary said that at the last meeting of the Australian Fruit Council the sub-committee had re-drafted the export regulations. These had not been gazetted until a standard for immature Oranges had been decided upon.

The Chairman asked if it were in the interests of the industry that there should be three grades—special, standard, and plain? He did not like the idea of sending "plain" grade Oranges to England.

Mr. Parkes said that South Australia intended sending only the special grade to Great Britain. Regulations should include three grades, as



#### DELEGATES AND VISITORS AT THE RECENT AUSTRALIAN CITRUS GROWERS' CONFERENCE.

Back Row (left to right):—J. Lindner, J. P. Larkings, S. Taylor, P. Rossiter, D. Murton, J. P. Greenwood, A. Fraser Gandie, D. Halhed, H. G. Such, A. J. Wood, — Rodwell, S. A. Cock (Government Citriculturist), P. Cobbett, G. H. MacMullan.

Front Row (left to right):—T. J. O'Brien, A. Schwennessen, W. E. Branson, J. A. Parkes, J. R. Gorton, M. J. Bouchier (Minister for Agriculture), S. Brentnall (chairman), B. S. B. Cook (secretary), Rupert Watson, J. M. Ward (Superintendent of Horticulture), F. M. Quick, J. M. Jacobs.

("Morning Post" photo.)

pletely disorganised. He made arrangements for the N.S.W. Citrus Association to keep the market supplied, and they had sent 40,000 out of the 100,000 needed for that market—not too bad for the first season.

Mr. Cook: "That comes from proper organisation."

Mr. Such: "Yes, and of packing house brands." In Wellington there were seven agents, and when one ordered a special brand he soon found the other six following. He suggested that New South Wales and South Australia should keep off the South Island's market when Victoria had a boat available (about every three weeks). He believed the New Zealand agents would be willing to accept only packing house fruit and from organised growers.

Mr. Branson said that if they continuously supplied the New Zealand

the Central Association, before the export trade opens, of the proportion of such 2000 cases they would be prepared to ship by each steamer (leaving at intervals of about three weeks), so that arrangements can be made with the New Zealand merchants to receive these regular supplies, thus greatly obviating the necessity for these merchants cabling for supplies elsewhere.

Mr. Jacobs seconded the motion.

Mr. Such said that the brand of packing house fruit received as much as 4/- per case higher than the unbranded. He did not believe in an over-riding Australian brand, but in the individual packing house brand. Any individual grower who was packing enough fruit should get a brand for it.

The motion was carried.

the New Zealand trade needed them.

Mr. Such said that the Griffith district had sent abroad "second" quality fruit, which realised good prices.

#### Inspection for Export.

On resolutions moved by Messrs. Cobbett and Greenwood there was a vigorous discussion, the necessity for inspection at the packing house being emphasised. Longer notice should be given of export requirements.

Mr. Quick moved—

"That the Department be asked wherever possible to arrange for an inspection of fruit intended for export in the packing sheds."—Carried.

It was decided, on the motion of Messrs. Cobbett and Quick—

"That in addition to inspection at the ship's side, the Department of Agriculture be requested to detail an officer in each district to inspect



fruit intended for export at the time of packing."

It was further agreed, at the instance of Mr. Greenwood—

"That conference recommend that a representative of the V.C.C.A. inspect all fruit for export after leaving the packing house and prior to its being placed in the ship's hold."

On the motion of Messrs. Parkes and Such, it was decided that the regulations as submitted by the Australian Fruit Council for export, be accepted by conference.

It was decided that a sub-committee consisting of Messrs. Larkings, Greenwood, MacMullan and Quick be appointed to report on the Melbourne market regulations and to take into consideration the question of adopting the Commonwealth regulations for Victoria, with any necessary amendments. The sub-committee's report was subsequently received and adopted, as follows:—

"That the third schedule of the regulations be deleted except Clause D; in so far as it deals with the standard of cases, i.e., the final word wide in the second paragraph, page 8, and that in place thereof the portion of the Federal regulations applicable, to wit, e, f, g, h, be substituted; par. 3 of the fifth schedule, page 8, to be amended so as to retain the words 'small shall consist of all sizes under 2 inches,' only one size to be packed in a case."

#### Border Inspection Fees.

Mr. Watson said that the Perri-cotta district had to pay 3d. per case as border dues. This was against the spirit of the constitution. He moved—

"That the executive of the V.C.C.A. take steps to abolish the border inspection fee between New South Wales and Victoria."

Mr. Fraser Gandie seconded.—Carried.

#### Melbourne Market.

Mr. Branson read his report on the Melbourne market.

A lengthy discussion followed. In reply to questions, Mr. Branson stated that the total used by the Melbourne market was about 308,000 cases. The total which left Victorian districts was 268,000, of which the V.C.C.A. handled 208,000, together with 60,000 from South Australia, making a total of 268,000.

Captain Halhed said that his district sent a large amount of fruit to Geelong and Ballarat, on which they paid the levy. This was not included in Mr. Branson's figures.

Mr. Quick said that the Cobram district up to the middle of November sent 98 per cent. of their production through the Association, and yet the

percentage of control seemed to be only about 60 per cent.

The Chairman said there was a certain amount of floating fruit about which they could get no record. It was a splendid achievement if the Association controlled 70 per cent. of the fruit.

Mr. Parkes said he was satisfied with the statement that from May to November 268,000 cases were forwarded from various stations in Victoria, and that 60,000 cases were absorbed by export to New Zealand, overseas, and country distribution. Although Mr. Branson was a paid officer, he had pleasure in moving—

"That the thanks of the conference be accorded to Mr. Branson for the strict attention which he had given to his duties during the last season, and for the good results which have been achieved."

Captain Halhed seconded the motion and read the following resolution from his district:—"In view of the large quantity of Citrus fruits marketed in Melbourne during the past season, particularly the big consignments which came without warning from Leeton, this conference of district organisations congratulates the V.C.C.A. on its efficient marketing arrangements, under which a steady price was maintained for good quality fruit." Continuing, Captain Halhed said that he represented 200,000 cases of fruit, and when he saw the Tongala resolution that the annual conference consider the advisability of changing the market representative, he telegraphed to his district with the result that the growers had made and passed the resolution he had just read. The Chairman, Messrs. Taylor, Fraser Gandie and Jacobs spoke in support, and the resolution was carried.

#### Removal of Western Market.

Mr. Branson suggested that the Western Market should be removed, as only 40 per cent. of the fruit was sold to the retail trade, over 50 per cent. being forwarded from the Western Market to the Victoria Market, where the V.C.C.A. had no direct agents. The transfer of fruit from the Western to the Victoria Market was very expensive to the grower, as it cost 14d. per case in carriage each way. In addition, there were a number of dealers working between the two markets. Much money had to be earned to keep these dealers, and if they were abolished by organising a decent market elsewhere, thousands of pounds would be saved annually to the growers. The Western Market was nothing but a joke. It was built to serve Melbourne 40 years ago, and now was hopelessly obsolete. Congestion of traffic in the narrow alleyways meant that carters had to wait

long periods to get in and out. The stores of the Association's agents were too small, being one-tenth of the space required, and they had to get premises away from the market in order to store the fruit. It seemed that the City Council was desirous of removing the fruit market from its present site, but was afraid that the Government would resume control of the land, and the Council would then lose the revenue. If the Government could be persuaded to give a clear title of the land to the Council, he thought the Council would not hesitate to build an up-to-date market elsewhere. If the whole of the fruit sales were conducted at the Victoria Market there would be a saving of at least £50,000.

Mr. Parkes moved—

"That the suggestion put before the conference by Mr. Branson be taken into consideration by the directors of the V.C.C.A. with a view to taking any action which may be deemed necessary."

Mr. Rossiter seconded.—Carried.

#### Leeton Growers.

Mr. Such said that Leeton district got £35,000 from the Government and spent it in 18 months, and after the organisation had broken down the growers paid £30 per head to clear off the liabilities. The growers realised the need for co-operation. A certain class of the Leeton growers, however, had always made their voices felt, so that co-operation had always received a serious setback. Leeton represented 100,000 bushels of Citrus fruit per annum, and that could not be worked on anything like a 50 per cent. basis, although his Association was determined to form the nucleus of a co-operative company consisting of the best element. He would ask the Victorian Association to give them the best treatment in order to prove that co-operation was not a failure. He asked the Association to send an official to assist them in a personal canvass, and moved—

"That in the opinion of the conference it is desirable that the V.C.C.A. send a representative then to assist in the canvass of Leeton growers."

Mr. Fraser Gandie seconded the motion, which was carried.

#### Marketing Arrangements.

Mr. Quick moved that all marketing arrangements be left in the hands of the local bodies or individuals, with power to deal with any agents, whether associated or not. Growers in his district were dissatisfied with the marketing arrangements. They had had two unsuccessful seasons, and they blamed the marketing arrangements. In the season just closed they started sending Valencias when the

market price was about 16/-; they arranged to send 300 cases a day, but after two days were told the market was glutted, and to send no more. The fruit was ready, so they approached an outside agent, who agreed to take a truck three days a week. These were sold for 11/- a case. Since then they had received no notification from the Association agents. The Association agents were getting more fruit than they could handle. He did not blame any individual; the system of distribution was wrong. The year previously growers received only an average of 2/- for Valencias.

Mr. Branson said Mr. Quick had good reason for acting as he did. He had dumped 500 cases on a glutted market, though the season finished far better than was expected. The price to-day was 20/-; last season they could not sell at 2/- to 4/-. Big firms who bought then and cool stored made a loss of £2000 to £3000. Later, as a result of a shortage, Leeton Oranges bought at 9/-, were sold at 26/- a case. There was a market price right through the year for all fruit, though buyers made believe that one agent could get more than another.

Mr. Quick said that the cause was obviously a glutted market, and the solution was more export. Instead of spending the money in the market, they could spend it better in organising sales in country districts. He congratulated Mr. Branson on his efforts, but his methods were wrong.

Mr. Schwennesen supported Mr. Quick in some of his remarks, but did not agree with the motion. His district was dissatisfied with the marketing scheme. The 50 per cent. outside the organisation do better than the members. His packing shed handled about 10,000 cases out of a crop of 30,000. Growers outside the Association did better than those inside. His idea was for the Association to get into touch with every retailer in Victoria.

Mr. Such said his Association had 13 agents in the Sydney market, but the fruit gravitated to four or five of them, though 295 agents competed for the business.

Mr. Parkes said that if the resolution were carried it would be the death-knell of the Association. The motion was defeated.

Mr. S. A. Cock, Victorian Government Citriculturist, gave an interesting address, comparing the Lemon industry in Sicily with that in Australia, and showed photographs of the industry in Spain. He urged the formation of a Lemon growers' club, and the desirability of closer contact with the southern Lemon growers. Mr. Cock was cordially thanked for his address.

#### Market Quotations.

Mr. Cobbett moved—

"That in future in all press market reports issued by the V.C.C.A. the grade shall be designated, and not the name of the district."

The speaker said that his Association resented the quotation of South Australian fruit as super standard, while Goulburn Valley fruit was shown as realising lower values, whereas the prices were identical.

Mr. Wood seconded, and Messrs. Larkings and Greenwood spoke in support of the Chairman's suggestion that there be an instruction to the executive of the V.C.C.A. to make representation to the newspapers. The resolution was carried.

was supposed to be forwarding fruit under the quota system.

Mr. Fraser Gandie moved an amendment—

"That at the beginning of each season quotas be sent to each district specifying the quantity of fruit to be forwarded to the market, such quotas to be founded on the estimates furnished by the districts."

Mr. Jacobs seconded the motion, which was carried.

#### Accredited Agents.

Mr. Parkes said that the accredited agents were receiving fruit from non-associated growers, and consequently not deducting the levy, whereas they deducted the levy from the associated



At the Citrus Conference.

Mr. J. A. Parkes (S. Aust.) (left) shaking hands with Mr. H. G. Such (N.S.W.) (right). The others in the picture are Messrs. Schwennesen, Jacobs, Cobbett, Quick, and Larkings.

#### Melbourne Market Supplies.

Mr. Greenwood urged closer touch between the districts and the market representative. Prices at times were ridiculously low, and it would have been better to have left the fruit on the trees. A representative of the Association could keep in touch with the districts by telephone, and be of better service to the growers. He moved, "That the market representative keep in close touch with the districts in respect to the supplies required for the Melbourne market."

Mr. Parkes: "Does not the V.C.C.A. average the quantities required from week to week and curtail supplies when the market is glutted, and increase where necessary? We have been working on that principle."

Mr. Branson said that it was very difficult to curtail the supplies of fruit to the market. Each district

growers. Pressure should be brought upon all growers to join the Association. His own Association had resolved that a meeting of accredited agents be called to consider the question of confining the sales so far as South Australian fruit was concerned to Association members, but he did not think there was any necessity to propose the resolution at this conference.

Mr. Schwennesen said that as it cost in levies an amount of from £12,000 to £15,000 a year to handle the Citrus crop, they could spend that amount in eliminating the dealers who were living on it.

Mr. Such: It cannot be done.

Mr. Schwennesen: We should get expert advice on the subject.

Mr. Rossiter submitted that if it only cost £12,000 a year, they had a very inexpensive staff of salesmen.



On the motion of Messrs. Parkes and Fraser Gandie it was decided that the delegates concerned form a sub-committee to consider the matter.

#### Crop Estimates.

Mr. Rossiter moved—

"That in view of the unsatisfactory way in which the estimates of Citrus crops have been made in the past, the market representative visit the growers and estimate crops for the coming season, and in conference with districts average the quotas and when the crops shall be harvested."

Mr. Fraser Gandie seconded this.

Mr. Parkes said that in his State a sub-committee of leading growers conferred with individual growers, checked their estimates, and made their own deductions. It would be too costly and take too long for the market representative to do this work.

Mr. Greenwood said that the estimates in his district were 15,000 and the supply 32,000. This was unsatisfactory.

Mr. Cook emphasised the necessity for a field organiser instead of leaving everything to the district secretaries. The crop estimates had been made in a haphazard way, and if the exports were fixed on the estimates they would naturally be low.

Mr. Rossiter added the words "when practicable," and the motion as amended was carried.

#### Organising New Members.

On the motion of Messrs. Cobbett and Fraser Gandie, it was decided—

"That it is advisable that an organiser be sent to the districts of each State during the off season for the purpose of stimulating interest and of getting new members."

#### Market Representative.

Mr. Wood moved—"That the Annual Conference consider the advisability of changing the market representative."

There being no seconder, Mr. Wood left the matter to the executive.

#### Synthetic Drinks.

The Secretary said that action should be taken to prevent traders from supplying the public with drinks and confectionery which purported to be the production of fruit and fruit juices, but which contained only chemicals. He moved—

"That the attention of State Governments be directed to the necessity, in the interest of national health and honest dealing with the public, for action to be taken to ensure that drinks and confectionery purporting to be Citrus fruit preparations, or derived from Citrus fruit, or such drinks and confec-

tionery named after a variety of Citrus fruit, shall contain the pure fruit juice or other unadulterated product of the fruit in question, and shall not contain any artificial substitute therefor."

Mr. Fraser Gandie seconded, and Mr. Cobbett supported, the motion being carried.

#### Quotations for Cases.

The Secretary said that last season they imported 150,000 cases. Orders for the coming season should be lodged at once, price 1/- cash, or 1/0½ on 60-day terms.

Mr. Such said that the majority of growers in New South Wales considered that the Canadian bushel box was more suitable for Oranges than the dump bushel case, having a cleat across the head for ventilation. The cost was less than the dump case. Buyers in Queensland and New Zealand preferred the Canadian box.

On the motion of Messrs. Fraser Gandie and Greenwood, it was decided—

"That it is desirable that the General Secretary should make enquiries into the Canadian bushel case with a view to its adoption by the V.C.C.A."

Mr. Cobbett moved—

"That it is desirable that in future, if requested, export cases be made available in shooks."

When stored during the winter made-up export cases were seriously blemished. They could easily be made up if they were supplied in shooks.

Mr. Greenwood seconded, but said that if hardwood shooks were held over they would warp badly.

Mr. Such said that they had made a mistake in adopting the present American case to "satisfy the requirements of the buyer." There were three sizes sent from Spain, four from the Mediterranean other than Spain, three from Western Australia, and two from South Australia. They should discard that case and stick to the one which suited the local market.

Mr. Paton withdrew a motion advocating a continuance of the present export case, and Mr. Cobbett's motion was carried.

#### Coming Season's Exports.

In response to a question from Mr. Parkes as to the attitude of districts regarding exporting in the coming season, Mr. Schwennesen said his district believed in continuing experiments, and would contribute 5 per cent. of the crop.

Messrs. Fraser Gandie, Larkings, and Jacobs said their districts would send the V.C.C.A. quota.

Mr. Taylor (Curlwaa) and Mr. Rossiter considered their growers would not export, and Mr. Such said there

would be no Citrus exported from the coastal districts of N.S.W., and probably about 3000 to 5000 cases from the Murrumbidgee irrigation area.

#### Deputation to Prime Minister.

The Chairman, in reporting on the visit of the deputation to the Prime Minister, said that the delegates came away thoroughly satisfied. It was obvious that the Prime Minister up to that time had not been fully apprised of the merits of their case. He was in the position of a man who had to depend on his departmental chief for advice. As the result of half an hour's chat, the deputation left with the absolute knowledge that the Prime Minister knew exactly their side of the question, and that when the matter came to be referred to him by the Minister of Markets and Migration he would be fully armed with the answers which they would be able to give to the Minister to any difficulties which he put in the way. The Prime Minister appreciated their position, and that was brought home to him by a chance expression from Mr. Parkes. Mr. Bruce could not understand the average loss for the season until Mr. Parkes used the words, "enterprise on the part of the growers," which made Mr. Bruce realise that that meant more than shipping overseas for profit, and that it meant exporting in defence of our own market. Therefore growers required more consideration. Mr. Bruce realised that it was more than probable that the grower would come out at a loss. There was likelihood of the fund being granted and of it being administered by the Association. They had a thousand better chances of getting a fund than they had before.

Mr. Such moved—

"That in view of the results of last year's English export, the executive be instructed to vigorously follow up the representations made to-day to the Prime Minister regarding the re-consideration of the limit of the insurance fund to five shillings and the averaging of all shipments made during the season."

The motion was carried.

#### Interstate Delegates.

At the instance of the Chairman, a hearty vote of thanks was carried to Messrs. Such and Parkes, both of whom in cordially responding spoke

## - LEMONS -

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highly of the efficiency of the V.C.C.A. The Federal spirit was clearly manifested.

#### Railways Department Appreciated.

Mr. Watson moved—

"That this Interstate Conference of Citrus Growers places on record its keen appreciation of the sympathetic attitude and practical help extended by the Victorian Railway Commissioners to the fresh fruit industry."—Carried.

#### Irrigation Problems.

Mr. Cobbett said that as the water supply was being extended, growers were feeling the want of water. The irrigation areas round Rochester were settled under a guarantee from the Government of a full and ample supply of water at all seasons of the year, but recently they received notice that the water was going to fail. Since the inception of the scheme the water had failed four times. The losses which he had sustained would easily have paid for his block, and other settlers would say the same. Although there was no water, other land was being opened up, and water was forced on men who did not require it, and who wasted it on grass lands because they had to pay for it. He moved—

"That in view of the repeated assurances given by the Chairman of the Water Commission that no further irrigation areas would be opened up unless and until an adequate water supply was available, this meeting of the Bamawm district Citrus Association records its strong protest against the subsequent departure from the principles so laid down; and further asserts, in view of the knowledge in the possession of the Water Commission as to the true position of the water storages for several weeks past, that it was the duty of the Commissioners to have then immediately apprised its clients accordingly, in order to enable them to safeguard their orchards as far as possible."

He also moved—

"That in view of the repeated failure of the Water Commission to carry out the undertaking of a full and adequate supply of irrigation water made by the Victorian Government, and in view of its continued expansion of irrigation areas and its inability to give an adequate supply of water for irrigation in dry years, this conference requests the Minister of Water Supply to appoint a Royal Commission, consisting of an independent qualified irrigation expert, to examine the whole Waranga scheme with a view to carrying out the above promise and securing to irrigationists the

principle that those who are first in point of time shall be first in point of use."

Mr. Jacobs seconded.

Mr. Greenwood said that the position was appalling, and that it applied to other districts.

The Chairman read a letter from Mr. Cattnach dated 3rd February. He suggested that the letter be received, remarking that it did not carry any conviction.

The motion was carried.

#### Agents as Accredited Delegates.

Mr. Larkings moved—"That no accredited agent as appointed by the V.C.C.A. be permitted to act as delegate or to take part in the discussions or to have power to vote at any future annual conference of the V.C.C.A."

The resolution was not directed against Mr. Jacobs or any particular agent.

The Chairman paid a warm tribute to Mr. Jacobs, against whom the resolution was apparently directed, stating that as the originator of the Association and one who had stood by it loyally in its greatest crisis, Mr. Jacobs was very welcome as a delegate. His practical experience was of great value to the conference.

The motion lapsed.

#### Scale Control.

Mr. Cobbett moved—

"That the Bureau of Science and Industry be asked to investigate the relative merits of various sprays for controlling scale on Citrus trees, particularly with regard to red oil and lime sulphur."

Mr. Greenwood seconded the motion, which was carried.

#### Export Supplies.

Mr. Cook said that last year it was decided that all districts should be charged for returns of export supplies, and he moved—

"That this conference instructs districts to supply the details already asked for of the export supplies which they have on hand, in order that we can render accounts."

The Chairman seconded, and it was carried.

#### Australian Fruit Council.

The Secretary said that at the last meeting of the Australian Fruit Council, it was made clear that the Government was not prepared to con-

tinue financing the Council on its present basis. He moved—

"That the motion passed by the Australian Fruit Council in favor of that body being re-constituted on a sectional basis to provide for a Federal Council for each section of the fruit industry to be financed by the Federal Government, is hereby commended and approved."—Carried.

#### State Fruit Advisory Board.

Mr. Cook moved—

"That this conference approves of the re-constitution of the Board as set out in the letter from the Department of Agriculture of 25th January, and will in due course appoint its representative."

This was agreed to, and the Chairman and Secretary were appointed.

#### Leeton.

Mr. Jacobs volunteered to go to Leeton at his own expense to organise the non-members in that district.

#### Fruit Marketing Organisation.

The Secretary said that the Minister had asked the State Fruit Advisory Board to prepare a scheme for the reorganisation of the fruit marketing, and the Fruit Board appointed a sub-committee which presented a report which had been adopted by the Government, who promised £2000. Under that scheme an organisation was to be formed, with a manager and a market representative to create a nucleus of a selling organisation at this end. Mr. Gorton had suggested that the Citrus Association's organisation be made available to the new body, and he (Mr. Cook) had been appointed manager, so he had not since drawn any salary from the Citrus Association.

The Chairman, in reply to a question, said that the present necessary work was being done for a lesser sum than when Mr. Cook's salary was included, so the Association was benefiting. If at the end of the six months Mr. Cook decided to continue as manager of the Fruit Board, they would have to appoint a successor.

Mr. Schwennessen asked if they were sufficiently staffed in the height of the season?

The Secretary replied in the negative, adding that the time was coming when they would have to increase the staff irrespective of his new position. There had been too great a strain on the staff, which led to hurried work and mistakes, which took a lot of over-taking. The two staffs were interchangeable, so both organisations benefited. The office expenses were divided.

Mr. Wood said that his district was alarmed when they heard that Mr. Cook had been appointed fruit mar-



GIBBS, BRIGHT & CO.—See Page xivb.



keting manager, but they would be more satisfied when he reported the circumstances to them.

Mr. Greenwood spoke in a similar strain.

#### Red Oil.

Mr. Larkings moved—

"That in view of the great amount of damage done to Citrus crops in various districts this year by spraying with prepared red oil, this conference urges the Government to take steps to ensure growers that the vendors of such prepared oil spray shall not supply oil of inferior quality."

In California the standards of oil were taken yearly to prevent faulty mixture.

Mr. Schwennesen seconded, and the motion was carried.

#### Advertising.

At the instance of Mr. Paton, it was decided to enter on an advertising campaign when funds permitted.

#### Fruit Sales Register.

Mr. Wood moved—"That a fruit sales register be established by the Government, and all fruit sales be registered by the purchaser, stating grower's name and address, nature of fruit, price paid, and agent who sold it, total sales registered for the week to be published in Monday morning's metropolitan paper. In regard to country sales, the agents to register the price and the purchaser, and the purchaser to verify same within three days." Incorrect returns had been sent by agents, and some machinery such as he suggested was necessary for the protection of the growers.

The Chairman said that there were no means of checking all the eccentricities of the market.

Mr. Cook suggested—

"That where a complaint is made on behalf of a grower of an inadequate return being made for his fruit, the market representative shall inspect the books of the agent and at the same time shall interview the purchaser and ascertain if the price recorded in the book is the price he paid for the fruit, and report to such grower the name of the purchaser of the fruit and the price paid for same."

Mr. Wood withdrew his motion and substituted Mr. Cook's, which was carried.

#### Appointment of Agents.

Mr. Fraser Gandie moved—"That there be no alterations in the appointment of agents for 1926."

Mr. Quick said that in view of the expressions of dissatisfaction of growers with the agents now employed, they should give the executive power to employ whatever agents they thought fit.

Mr. Cobbett moved—

"That the appointment of agents be left in the hands of the executive to be made according to their discretion as circumstances arose. The total number of agents not to exceed seven."

Captain Halhed seconded this amendment, which was carried.

#### Provincial Markets.

The Secretary reported that they had not been able to secure agents in big centres, like Ballarat and Geelong, because they would not agree to the Association's terms.

The Chairman: We ought not to vary our commission.

Captain Halhed said that his district was chiefly responsible for sending fruit to Ballarat and Geelong, and he was prepared to influence his agents (Bryant and Gourlay) to this extent, that if he would not accept Association fruit, his district would switch off him to another agent.

On the motion of Messrs. Cobbett and Greenwood, it was decided—

"That the conference instruct the executive to engage agents at Ballarat and Geelong on the usual terms."

#### Sale of Oranges.

In reply to a question regarding increasing the sale of Oranges, the Secretary said that if growers approved of the new fruit marketing organisation, a uniform price would be fixed and advertised. There would be 9d. commission to station masters and a levy of 3d. per case, 2d. going to the Central Association and 1d. to the local district. The consumer would pay these charges, also the freight. If the price were fixed at 10/-, the grower would get 9/-, less freight.

On the motion of Messrs. Greenwood and Wood, it was decided—

"That this conference approves and supports the fruit marketing organisation in its efforts to increase the channels of trade in fresh fruits, particularly the scheme under which station masters are receiving orders, and requests the fruit marketing organisation to embrace the Citrus industry in its scheme."

#### The Levy.

The Secretary suggested that they should reduce the levy so far as privately sold fruit was concerned, as they might get more revenue in that way.

Captain Halhed moved—

"That the levy for V.C.C.A. purposes be twopence per case on all Oranges sold, and one penny per case on all Lemons sold."

An amendment by Mr. Schwennesen, "That Lemons be not included" was defeated, and the motion was carried. If a Lemon Men's Club were

formed they could levy what they liked.

Captain Halhed said that the Secretary has paid his own salary by finding a wonderful market for Lemons in Brisbane, which averaged 9/- a case.

#### Lemons.

Mr. Schwennesen reviewed the Lemon situation during the last five years. During that time they had three more or less fair years, and two very bad ones. It would not take much to revolutionise and stabilise the Lemon industry. As to the peculiarity of over-supplied markets, if the Melbourne market absorbed 100,000 cases at 15/-, by putting 110,000 cases on the market the price would drop to 5/-. There was room for improvement in the quality. Growers must cure them and put them up in a more marketable condition. He suggested the institution of curing houses co-operatively, as they could not export Lemons which had not been cured. The Brisbane market started off well, but later he was advised that the demand had ceased, and that he was not to send any more.

Continuing, Mr. Schwennesen said that if 50 per cent. of the growers in Victoria could co-operatively cure their Lemons, they would force the other 50 per cent. to come into line. As to the formation of a Citrus by-products plan, they must have a means of getting rid of inferior fruit, which Californian authorities estimated at from 23 per cent. to 50 per cent., and it was the inferior quality which was processed for peel and juice. It could also be processed for essential oils and citric acid. Last year the by-product imports amounted to about £21,000, which ought to have gone into the pockets of Lemon growers in Australia. With such a plant they could control their by-products.

The Chairman said that South Australia started with an elaborate plant, but the market was too small for it to efficiently operate.

Mr. Schwennesen said the fault was not in over-production, but wrong handling. Lemon planting throughout Australia had almost ceased. The best way would be to get the Lemon growers together by forming a Lemon Men's Club. They should also commence a publicity campaign in favor of the fresh Lemons.

The Chairman said that members were indebted to Mr. Schwennesen for placing this information before them. The cure for many Lemon ills was the curing of the Lemons themselves. The market was spoilt by the big influx of poor quality Lemons.

The Secretary said that the opening of the Brisbane market was largely

due to Mr. Schwennesen, as his consignment of cured Lemons was the first to reach there, with the result that the agent informed him that if that supply could be continued there would be no more Italian Lemons imported. He was so impressed with them that he arranged a press campaign, but when the big consignment arrived they were so rotten that the agent cancelled his campaign. Consignments by rail were more direct and more regular. A Melbourne firm had commenced to manufacture essential oils, and were satisfied with the prospects.

Mr. Schwennesen moved—

"That in the opinion of this conference it is desirable that a Lemon Men's Branch should be formed."

Mr. Quick seconded, and this was carried.

V.C.C.A. Directors.

Captain Halhed moved—

"That this conference hears with regret the intimation of the resignation of Mr. J. R. Gorton, and expresses its appreciation of his efforts on behalf of the Association."

Mr. Quick seconded.

The Secretary said that conference ought to consider whether the time had not arrived when the directors should be placed in the same position as other directors, and be voted some remuneration.

Both Mr. Quick and Mr. Cobbett supported these remarks, especially with regard to the chairman, of whom they were very proud. It required an able and unusual man—a man of affairs—to carry on such an Association, especially at its inception. The same remarks applied to Mr. Watson.

The motion was carried.

The Chairman, in reply, thanked delegates for their appreciation. The directors had more to do possibly than members imagined, but it was a labor of love, and he would endeavor to give his best efforts so long as he remained in office.

Mr. Watson also returned thanks.

It was decided to print the memorandum and articles of association and make same available to shareholders, also to send a weekly letter to districts.

A hearty vote of thanks was carried to the directors and officers, and the conference concluded.

### COMBAT INFLUENZA WITH CITRUS JUICES.

Health departments of metropolitan cities in U.S.A., have been reporting an abnormally large number of influenza cases for

this time of the year. As yet the spread of this ailment has not reached epidemic proportions. Nor is it considered likely that such a condition will develop as that experienced in 1919, the time of the last serious epidemic. Still it is recognised that there is considerable danger in the situation.

The use of grape fruit will prevent any serious spread of influenza.

During the epidemic of 1919 it was found that a strictly grape fruit diet was the best thing that could be prescribed for an influenza patient. Many interesting stories are told by doctors who used this remedy. Dr. W. A.



(Illustration by Courtesy of the Victorian Railways)

MacKenzie, of Leesburg, gave up his civic and business affairs during the 1919 epidemic and treated about five hundred people who had influenza. All he gave them, he says, was fresh grape fruit juice and the ordinary soda which is found in almost every kitchen. He did not lose a patient. One of his brothers, who is a doctor in Michigan, used the same prescription, with the same perfect result.

Many important things about the health value of grape fruit have been discovered in recent years. It has been found that grape fruit is especially valuable as a diet in fever cases, including influenza. When eaten regularly, it keeps the body properly toned-up, and in that manner also serves as a preventive.—"Florida Grower."

### THE VALUE OF ORCHARD MAPS.

IS IT worth while for the average commercial fruitgrower to go to the trouble of making a map of his orchard, showing the location of every tree? Will such a map help in any way to increase the net profits which he receives from the orchard? The progressive, up-to-date grower of deciduous fruits will almost invariably answer "yes." Thus writes Mr. L. Austin of the University of California, Davis, Cal., U.S.A.: The reasons for an affirmative answer will be found in the following paragraphs.

The map may be used as the basis for a few simple records of certain individual trees which require special attention, or it may be the basis of an orchard analysis to locate all the low producing trees, and determine the various causes contributing thereto, and also the necessary remedial measures.

A few of the very evident and practical uses for an orchard map are the following:—

1. One of the most important uses for an orchard map is to make note of certain trees which have been attacked by insects, diseases or rodents. When such records are made regularly it is usually possible to apply control measures before the injury has progressed far enough to decrease the productivity of the trees.

2. A map is of value in locating trees which are not the variety that they are supposed to be. Nearly every orchard contains some trees of this sort. They may be of some other variety, or they may be seedlings. In an Almond orchard the seedlings may bear bitter nuts, and great care must be taken not to mix these with the good ones. The map should usually indicate that such trees should be top-worked.

3. In the case of orchards which are planted with two or more varieties in alternating rows, or pairs of rows, for cross pollination purposes, the map is of great value in showing the location of the rows of the different varieties. It is also useful in locating occasional trees which were planted in the wrong row.

4. When one has determined the best locations for temporary irrigation ditches, they can be marked on the map. This will greatly facilitate laying out the ditch lines in years to come.

5. In case a careful orchard analysis is to be undertaken, the map will be the basis of individual tree production records over a series of years. This is usually an estimate of the crop on each tree, taking into consideration a normal full crop for the year, rather than actual weights of the fruit.



# Murray Citrus Growers' Association.

## Review of the 1925 Season's Operations.

### Local and Export Trade.

### Interesting and Valuable Information.

Report by the General Secretary, Mr. J. A. Parkes.

THE OUTSTANDING FEATURE of the 1925 season was the appreciably increased yield. Following on two successive short crops, this was especially gratifying to growers, although prices were not quite up to the 1924 level.

Estimates supplied by districts in January, 1924, indicated a production of approximately 67,000 cases.

During June, owing to a revision by one centre, this was increased to 69,000, and as the season progressed it became apparent that, with the exception of Murray View, the approximate yield in all districts had been considerably under-estimated, and a revised estimate submitted during the middle of August increased the total to 120,000. Although complete returns are not yet available, there is little doubt that these figures have been realised.

### Melbourne Market.

Up to the end of November our contribution to this market totalled 59,658 cases, as compared with approximately 46,000 for the previous season.

The following statement shows the quantities handled by the various agents for the respective States:—

| Agent.                | Victoria. | South Aust. | Total.  |
|-----------------------|-----------|-------------|---------|
| Tim Young . . . . .   | 24,442    | 26,832      | 51,274  |
| Lister, Geo. . . . .  | 30,223    | 13,026      | 43,249  |
| Coastal Farmers . . . | 31,692    | 10,661      | 42,353  |
| I.F.M. . . . .        | 33,368    | 3,320       | 36,688  |
| Pang, H. L. . . . .   | 28,722    | 5,819       | 34,541  |
|                       | 148,447   | 59,658      | 208,105 |

Victorian districts also under-estimated their crops, and a much larger quantity came on to the market than was anticipated. That factor, in conjunction with heavy supplies from New South Wales, had a material effect on Melbourne prices.

### Adelaide Market.

For the first time in the history of the Association, districts were given a free hand regarding their weekly supplies to this market.

In taking this action, members of executive considered that the quantity usually handled did not warrant the issue of a quota, and it was also thought that, with the advent of the single case campaign, this market would not be drawn upon to the same extent as heretofore. These calculations were upset, as 20,000 cases found their way to this market, a total never previously reached.

A striking feature was the remarkably even prices realised throughout the season, for good quality Navels no greater fluctuation than 2/- per case taking place, and for several weeks the variation was only 1/-.

### Condition of Fruit.

Until towards the end of the season the fruit arrived mostly in excellent condition, very slight waste showing.

Mandarins arriving late caused considerable anxiety, owing to the large amount of waste which developed. Members would be well advised to get this class of fruit on the market as early as possible.

### Export.

At the beginning of the year the Central executive decided that the 1925 export should be 2500 cases, in two shipments, 1000 of which should be on the f.o.b. basis.

As the season advanced it was realised that crops were much heavier than anticipated, and it was resolved that a third consignment should be despatched in September, so that the late London market could be tested, and also to demonstrate whether fruit shipped late in the season could be landed in a satisfactory condition, the previous policy of executive having been opposed to the forwarding of consignments later than July or early August. The quantity shipped was 4464 cases, contributed by the following districts:—

Waikerie, 1823, including 851 bushel cases.  
Berri, 1207.  
Renmark, 760, including 240 bushel cases.  
Murray View, 400.  
Mypolonga, 200.  
Ramco, 74.

Of this total the first parcel of 1823 cases was sold through Messrs. Geo. Wills & Co., Liverpool, 1000 being on the f.o.r. basis. The second was despatched to London through our accredited agent, the South Australian London Trade Commissioner, and comprised 1043 cases.

It was intended that the final shipment should be sold in Hull through Messrs. White & Sons, but, owing to the shipping strike within the Commonwealth, no ship was available for this port, and after being held for several days it was forwarded to London and sold there.

This is the third successive year in which our operations have been interfered with by strikes, and owing to a similar hold-up in South Africa, London was eventually flooded with heavy consignments of wasty fruit, making it very difficult to secure good prices, even for sound fruit of good quality.

At one period the "Roman Star" landed 110,000 cases from South Africa, this being the largest single shipment ever made to the United Kingdom.

### Condition of Fruit on Arrival Overseas.

According to catalogues received from time to time, the quality of the Oranges on the London market throughout the season has been inferior in character. In these circumstances it is a source of satisfaction to realise that our own consignments, generally speaking, have reached overseas ports in good condition, very slight waste showing.

Reporting on the "Osterley" parcel, the London agent comments in the following manner:—

"Every care and attention must be given to see that the quality and grading are up to the highest possible standard. Several cases were noted where grading could have been considerably improved, particularly some marks showed dirty fruit. We trust you will call attention to this all-important matter."

Without specific details it is impossible to locate the district or districts at fault, but I am communicating with the London Trade Commissioner, asking whether the marks under comment have been noted.

In the meantime it is desirable that local executives should draw attention to this complaint, so that steps may be taken to prevent a recurrence. The gross average realisation for the various districts is as under:—

"Anchises," Liverpool.—Renmark (1-1/3 bushel), 21/9½; Ramco, 21/9; Berri, 17/6; Waikerie, 14/0½ (bushel cases); Murray View, 12/4½ (bushel cases).

"Osterley," London.—Murray View (1-1/3 bushel), 23/-; Berri, 22/8½; Waikerie, 22/1½; Renmark, 20/11½.

"Jervis Bay," London.—Murray View, 21/8½; Mypolonga, 19/1; Berri, 16/10½; Waikerie, 16/0½; Renmark, 12/7½ (bushel cases).

In addition to the above a sale of 1000 cases at f.o.r. rates was made, 1-1/3 bushels making 17/-, and bushels 12/9.

Apart from this sale the above prices will not be regarded by growers as satisfactory, although compared with other States, and a parcel of South Australian Oranges outside our own Association, ex "Osterley," they are remarkably good.

The following, according to sale catalogues, are the prices obtained for parcels ex "Osterley" for specific counts:—

South Australian (not Association).—100/126's, 6/9 to 11/-; 150/176's, 7/6 to 13/6.

New South Wales.—126/136's, 8/9 to 9/-; 150/200's, 11/- to 12/-.

Victorian.—126/150's, 7/9 to 11/6; 176/200's, 10/- to 12/-.

Murray Citrus Growers' Co-operative Association.—126's, 22/5½; 150/200's, 26/7.

The above prices refer to Navels only.

The selling agent, commenting on the various parcels, stated that "the South Australian fruit was generally of good quality, but the condition poor, cases showing from five to twenty wasted Oranges, also that some shippers had lined their cases with paper."

New South Wales.—"The condition of the Siletas and Joppas was better than that of the Navels."

Victoria.—"The quality of this fruit was good; the condition, however, varied considerably, some packings showing the contents slightly defective, others very defective and wet, and a considerable quantity with moisture apparent on the outside of the case."

The agents concluded by saying:—"In our opinion the cause of the condition of this fruit from all States was excess of water, due, no doubt, to heavy rain or over-irrigation."

The above comment on South Australian fruit does not refer to our parcel. In view of the above, our members, despite the low prices, may be congratulated on the comparative success of their shipments.

A noticeable feature, with one exception, is the remarkable difference in value for counts of 150 or anything in excess thereof.

The following are the general averages:—"Anchises": 126's, 19/4; 150/210's, 28/5.

"Osterley": 126's, 22/5½; 150/210's, 26/7.

"Jervis Bay": 126's, 15/9½; 150/210's, 19/5½.

In this connection I desire to draw the special attention of members to the striking disparity in the prices displayed in the following table, showing the gross average realisation on all shipments for the undermentioned counts:—

64—11/6; 80—12/9; 96—15/11; 112—18/6½; 126—20/3½; 150—24/1; 176/200—25/8½.

The gross realisation on counts of 150 and over on the "Anchises" and "Osterley" parcels was 27/3, compared with 20/2½ for similar counts ex "Jervis Bay."

Why the latter parcel failed to return what might be regarded as fair values for these counts is difficult to determine. Assuming that the fruit under these counts was equal in condition to the other sizes, an explanation of this variation is required. It is, however, apparent that counts of less than 126 will not realise payable prices overseas, but that anything in the region of 150 or over should be a profitable proposition.

As an indication of the preponderance of large fruit in our consignments, the following is an illustration:—

Up to and including 126's.—"Anchises," 67 per cent.; "Osterley," 73½ per cent.; "Jervis Bay," 76½ per cent.

It is a well-known fact that, even on the local market, the large sizes are poor sellers, and it would be infinitely better policy for members to place that class of fruit on the Commonwealth markets, rather than incur the heavy expense of transport to overseas ports, with a certain knowledge that prices there would not be remunerative. The London demand for large fruit is limited, and buyers of that class are apparently disinclined to pay an equivalent value.

Twelve members showed a loss of £10/1/3 on out-of-pocket expenses, besides the value of the fruit. Nine of these were on the final shipment ex "Jervis Bay," London, and three on the "Anchises," Liverpool.

Taking the average net realisation on the three shipments, only two members showed a loss of £2/16/2. In the above instances the counts generally speaking ranged from 64's to 126's. 32/- was the highest price realised on any parcel, but several members touched 30/-.

Although the above losses are greatly regretted, in the circumstances, late shipment, extra costs and handling due to shipping strike, excessive South African supplies (also due to strike), and abnormal percentage of large sizes, members may be congratulated upon the success of the 1925 operations, more particularly when other South Australian fruit on the same steamer, together with Victorian and New South Wales, showed such disastrous results.

#### Federal Insurance Fund.

Application has been made to the Federal Government for the operation this season of the Guarantee Fund in existence last year. This was to provide for loss on out-of-pocket expenses.

No call was made on the fund by our members on the 1924 export, but claims have been submitted for losses on the 1925.

Should they be allowed on the basis of last year's operations, the full amount of the claim will be paid, but if, as is proposed by the Government, the average return of the whole season is taken into account, our indemnity will only amount to £2/16/2, as the average profit on one or more shipments more than balanced the losses, except in the two cases above mentioned.

#### Agents' Report.

No detailed reports have been received regarding the "Anchises" and "Jervis Bay" parcels, beyond the statement that, generally speaking, the fruit arrived in a satisfactory condition, some waste showing in the latter.

Our accredited agent, reporting on September 16, writes:—

"Our parcel ex the 'Osterley' came to hand in fairly satisfactory condition, although some cases showed mouldy Oranges. We have now got this business in good shape, and the external appearance of the packages was excellent, the use of wire banding being much appreciated by buyers. The new label is also very fine, and the get-up of same more attractive than the old one."



"We were unfortunate with this shipment in meeting a market flooded with South African Navels, ranging in condition from reasonably sound down to worthless. Prices for same have been as low as 2/- and up to about 18/-; in addition, our sales have been handicapped by the low prices made at auction London by South Australian, Victorian, and New South Wales Navels, also from the 'Osterley.' I have sent you the printed sale catalogue covering these auction prices, and you will be surprised to see the low values made. I myself did not see these auction Oranges, so that I cannot comment on their landed condition. In addition to the auction fruit, Messrs. Ridley & Houlding had a parcel of 3000 cases (bushels) from Victoria, and these, I learn, have come to hand in very poor condition, considerable waste showing, and the loss to the receivers is going to be a severe one.

"Your reported forward sales at up to 18/- f.o.b. showed either a tremendous amount of optimism on the part of buyers, or else a lack of knowledge of the attendant risks. 18/- f.o.b. means for all practical purposes 25/- landed in a sale room, and that all money made over and above that average is a profit to the speculator. With the tremendous quantities of South African Navels now coming to hand each year at the same time as ours, it is

becoming increasingly difficult to establish and maintain prices much over the 20/- and 25/- mark, so that it looks as if the speculative element will disappear, and that the trade will shape itself into a consignment one, which I am convinced would be better for all concerned.

"Progress sales showed a range of from 18/6 to 32/- for the first lot of about 330 cases."

The Commissioner in a further report stated:—

"Last mail I advised you that we had made 24/10 per case for approximately 600 cases, but with the clear up of the parcel we had to make considerable reductions in price in order to get out. We opened at 22/- to 30/-, but could not hold to these values, because of the big quantities of irregular quality South African Navels marketing at 2/- up to 18/-, and the depression caused by the low values made at auction for same origin fruit as ours. With the clear up of the parcel we also met with some bad condition, many cases showing mould, and this made final clearance difficult. These factors taken together are the explanation of the difference shown in prices realised on account sales. On the whole, the parcel was fairly satisfactory, but the defect was that the fruit was a little too forward on arrival."

## Propagation of Berries.

### INTERESTING HINTS.

**L**OGANBERRIES, black raspberries (blackcaps), dewberries, and trailing blackberries are commonly propagated by tip layering. This is done by bending down the canes of the previous season's growth and covering the tips with two or three inches of fine moist soil. The covered tips strike root while still attached to the parent plant. In windy localities it is best to dig shallow holes near the parent plant, insert the cane tips, and press the soil firmly around them to ensure a good root system (writes Mr. J. L. Stahl, Division of Pomology, University of California, U.S.A.).

When the root system is three inches or more in diameter, the tip with a few inches of cane attached is ready for transplanting in the field.

Tippling is done in late September and October, when the length growth of the new cane has stopped. The tips are usually well rooted by midwinter, and can be transplanted. Some propagators grow the rooted tips in a nursery for a season before transplanting to the field.

### Mound Layering.

Plants like currants and gooseberries which "stool" are often propagated by mound layerage. In the fall after the growing season new shoots are bent outward and moist soil

mounded over the crown of the parent plant at the base of the shoots, the latter being wounded by scraping with a spade at points where roots are desired. When well rooted the shoots may be severed from the parent plant, saving as much of the new root system as possible.

### Root Suckers.

Red raspberries and bush (upright) blackberries are commonly propagated by underground shoots and root suckers on which upright stems with roots are formed. Cutting through the sprouted root with a sharp spade separates the new plant from the mother plant. Young fields produce more and stronger plants than old fields. Roots of these same plants may be cut into pieces two or three inches in length and planted in early spring; but it requires a year longer to secure good plants by this method than by the sucker method. Root cuttings are placed in a nursery row in a trench three or four inches deep and covered with fine moist soil. After a year's growth, they may be re-set in a permanent field.

### Runners.

Strawberries propagate by runners from the mother plant. Buds on alternate joints of the runners send out leaves, and will produce roots if weighted down with a clod or soil. Plants nearest the mother are strongest, and therefore are more desirable for field setting. Runner plants from a young field are preferable, as they are usually strong and are not likely to be diseased or infested with insects.

## Western Australia.

### WHAT'S W.A. DONE?

A correspondent from Western Australia draws attention to the fact that no export from Western Australia is indicated in the advertisement of the "White Service," showing smiling John Bull with a basket receiving fruit from Australia.

Strangely enough, in the same advertisement no export is indicated from Victoria, N.S.W., or Tasmania either—only South Australia, and the fruits which good old J. B. is smiling about include Bananas, Pineapples, Rock Melons, and Lemons—none of which Australia exports to the United Kingdom. In the picture a falling Pineapple will soon be hitting the British Bulldog on the boko. Guess that artist wants some hurry-up.—Willie Wagtail.

### EAT LESS FRUIT?

The sweet young Sunday School teacher, in giving a lesson on Obedience told the story of the Garden of Eden, and how Adam and Eve disobeyed after being forbidden to eat the fruit of the Tree of Knowledge.

After a suitable pause, the teacher remarked, "Now, children, can any of you tell me what lesson that teaches us?"

"Yes, miss," replied a youngster. "To eat less fruit!"

The man who's afraid to do too much for people he does business with, needn't be afraid of having too much business to do.

# Lemon Cultivation in Sicily.

## Cultivation, Picking, Handling and Packing.

Helpful Observations Which Should be Serviceable to Australasian Growers.

(By S. A. Cock, Victorian Government Citriculturist.)

UP TO A SHORT WHILE AGO the Australian Lemon trade in Sicilian fruit was very extensive, and was controlled by merchants at Messina. Restrictive legislation as regards diseases has now rendered it almost impossible to land Sicilian Lemons in Australia. Lemons are grown in many countries, but Sicily is pre-eminently the home of the Lemon. Soil, climate, and generations of experience have enabled the Sicilian to deal with Lemons better than anyone else. This applies equally to the Citrus fruits produced in Spain and Palestine.

### Soils, Situation, and Climate.

Speaking generally, the soils and situation in Sicily may be divided into two sections, coastal and mountain. The coastal section embraces the narrow coastal plains and lower portions of the valleys up to an altitude of 1500 ft. The mountain section includes the higher valleys and hills ranging to an altitude of 3000 feet; beyond this, Lemon growing is precarious, on account of climatic conditions.

The soils of the coastal section are sandy and frequently underlaid with a gravelly subsoil. Lemons grown on these soils are smaller than those of the mountain section, and have not the same keeping quality. Mountain soils are clay loam, with good natural drainage, and Lemons produced on these soils are in every way superior to those grown on the sandy soils. The keeping quality of the Lemon depends on the soil conditions more than on elevation, and the deep soils of the mountain section produce a fruit which will hang on the trees from January to April, because of the greater drought resisting character of the soil. The quality of mountain grown fruit is such that it commands a much higher price than that grown on the coastal areas.

### As Regards Climate.

The annual rainfall averages about 30 inches; more than two-thirds of this falls from September to April, the winter or wet period. Temperature ranges from 34 degrees (winter) to 95 degrees (summer) on the average, and maximum and minimum may be 105 to 29 degrees Fahr., although this is exceptional.

### Irrigation, Cultivation, and Fertilising.

From the foregoing it will be observed that irrigation is necessary, and is practised whenever possible. On the higher altitudes by using the water from the streams flowing from the uplands, and on the lower altitudes by pumping from the streams and conveying the water in lined channels to the groves. The first irrigation is given usually in June, with subsequent irrigations during the summer.

Cultivation and fertilising are very important phases of Lemon growing in Sicily. Nearly all cultivation is performed by hand labor. Four and five cultivations are given each year.

In applying fertilisers attention is given chiefly to green cover crops; also organic fertilisers, such as animal refuse, vegetable compost, and bonedust. Artificial fertiliser is sparingly used. For lime and potash, wood ashes are always availed of. The quantity applied varies, and runs as high as five to six tons of organic matter annually to the old trees, and smaller quantities to the young trees. The fertilisers are chiefly applied during the

spring, although autumn applications are sometimes given.

### Nursery Trees and the Planted Grove.

Seedling Orange trees are raised usually from the Bitter Orange, *Citrus bigardia*. The seed is sown in March and April, and in two months the young plants appear. These are set out in the nursery the following spring, the plants then being about 18 inches high. All seedlings, whether planted in rows or in groups of four for the purpose of basin irrigation, have a distance of about 18 inches between each tree. They are staked and trained to grow straight, and in the fifth year when they are tall, well-grown trees, they are budded or grafted. The bud or graft is always inserted at a height of four feet from the ground, and frequently the seedling is planted in its permanent position in the grove before being budded or grafted.

In the grove the trees are planted as nearly as possible in rows running north and south, at distances of 15 feet apart, and shelter is afforded the grove either by stone walls or by hedges. The trees having a high standard, and being planted close together, eventually meet overhead. Pruning consists of the removal of all dead wood, water shoots, and stunted or rank growth. This is performed every year, and in addition about every third year, after the main crop is harvested, a thorough thinning of the branches is performed, this is for the purpose of maintaining an open tree so that air and light may penetrate, and for the fruit to be evenly distributed through the tree. Trees come into bearing in the eighth and ninth year from the time the seeds are sown.

Lemon trees bear a series of crops. The main crop produced from April, May and June blossoms, and ripening according to altitude, from October to February, produces the finest quality and best keeping fruit. Blossoms produced from July onward produce crops of more or less inferior quality, and are not seriously considered for export purposes, excepting those which ripen from April to June; these are valuable on account of season, and an article dealing with the "Verdelli" Lemon appeared in the November issue of the "Journal of Agriculture," 1924.

### Picking, Handling, and Storing.

Men, women and girls pick the fruit into small wicker baskets of one and a half to two gallons capacity. The baskets are lined with soft canvas in the form of a bag hardly resting on the bottom. In picking all Lemons, no matter how green, which are three inches in diameter and three and a half ounces or over in weight, are taken. The size and weights are judged with the utmost care and accuracy, using the thumb and forefinger as a gauge. Further, all Lemons which are turning yellow are taken, whether they reach the standard or not.

All Lemons are picked with the fingers, breaking off a small piece of the twig with the Lemon. When picked, the fruit is assembled at certain stations on the roadway, where they are handed out one by one from the pickers' baskets. The stem is cut off close, using a snippers of the "Tuttle" type. The Lemons are here placed into canvas lined baskets of about a bushel capacity.

Into No. 1 basket are placed all the apparently perfect and largest size Lemons. Into No. 2 basket all apparently perfect but smaller size fruits, and so on, four grades



being made. Defective and inferior quality Lemons are forwarded at once to processing factories for manufacture into Citrus by-products.

All first and second grade fruit is removed to the drying house, where it is spread out on stone or concrete floors, covered with mats. On the mats the fruit may be piled from one to three feet high, and may remain in the drying shed for a period of six to eight days. The object of drying is to remove moisture by evaporation from the rind. Care is always taken to see that the bottom Lemons in the heaps do not heat.

When sufficiently dry the Lemons are sorted over. The sound fruit is wrapped in tissue paper, carefully packed in boxes, removed to the warehouse, where they are stored, or from where they are shipped. All defective Lemons are rejected in the drying house. If Lemons are to be stored they are placed in what is known as cool stores (not refrigeration); here they are very carefully examined every three weeks, each Lemon being unwrapped, and if found sound re-wrapped, and placed back into storage. If showing sign of wilting or decay, such Lemons are removed.

When the fruit is to be exported the Lemons are taken to the packing house; there each fruit is unwrapped and examined by expert sorters, who are able to distinguish a blemish not discernible to the unpractised eye. All blemished fruit is placed aside. This is really re-grading the fruit, and is necessary because of shrinkage in storage. After three or four months' storage Lemons will have shrunk by 15 per cent. of their bulk in the packages. Shipments are made overseas of the fruit ripening from November to February.

In packing the work may be divided into six operations, as follows:—

First, the Lemons are unpacked and unwrapped by girls, who place them into lined baskets.

Second, experienced male graders sort them and place them into other lined baskets.

Third, the Lemons are now wrapped in fresh tissue paper by girls.

Fourth, the fruit is now carried by boys to the packers.

Fifth, the fruit is now packed by very expert packers into various sized boxes required by the trade. Every fruit is handled with particular care, and packed very closely. As the box becomes full, the fruit in the centre is brought higher than the sides, and when the final layer is placed in the box, the outside fruit stands about half an inch above the side of the box, whilst the middle is fully two and a half inches above.

The sixth and final operation is nailing down. The pliability of the wood (beech wood) is fairly great, and nails frequently draw out; in order to prevent this, the boxes when nailed down are bound on each end with hoop wood. The pliability of the wood and the form of the pack allow for shrinkage of the fruit, which after storage is not considerable.

### Conclusion.

The magnitude of the Sicilian Lemon industry is due to the skill of the Sicilian in cultural practice, plus the care in handling the crop. The process of procuring a Lemon fitted for overseas export is purely one of elimination, and in reality the survival of the fittest. It has to be remembered that generations of experience lie behind the industry in Sicily. In Victoria, very fine Lemons are grown. Those on certain soils, and in certain localities are more fitted for export purposes than others. For the essentials of this article, I am indebted to a Sicilian Lemon merchant visiting Victoria last year, plus some observations published by W. Catton Grasby, F.L.S., many years ago, which, according to M. Favoloros, still attain in Lemon culture in Sicily.

It is to be hoped, therefore, that seeing Victoria has a wide field to cover in producing Lemons for interstate and local markets, a perusal of this article will tend to show wherein any deficiencies in local cultivation and handling methods lie.

## VICTORIAN STATE FRUIT ADVISORY BOARD.

### Election at Picking Time.

The method of voting for the appointment of delegates in the Apple and Pear section is causing much heartburning.

Growers insist that the time for this election is most inopportune. Other sections have made, or are making, their appointments through their organised channels. The Central Association (which in the past has made the appointments) has been passed over, and its individual branches, and others not affiliated, have been asked to nominate.

Many think it would have been simpler for the Minister—who states he believes in organisation—to have asked the non-affiliated Associations to join up with the Central Association, or at least to be represented at the coming convention, when the delegates could be elected in open conference, at Portland in May.

Of 86,000 acres under fruit in Vic-

toria, over 35,000 are under Apples and Pears; allowing for Cherries, Plums and other fruits, the total will include half the Victorian fruit acreage, yet for this big section only two delegates are allowed, the same representation as sections with 5000 acres or less. Can any valid reason be put forth in support of this?

Then what of the individual Associations and their voting power? One Association has 350 members, another has 20 members; yet each Association will have one vote and no more. Is this democratic? When the meeting is called and the growers are asked to place the figures 1 to 20 (or it may be from 1 to 30) alongside the list of candidates, how will they go about it? There will surely be some difficulty when Brother Jonathan from Sturmer Creek wants to put Candidate Fitzdoodlepipe first, and at the same meeting Mr. Graven Stein wants to put the same candidate last, and uses at the same time unparliamentary language because the fellow was nominated at all.

Even after sending the nomination papers sufficient time will have to be allowed for a meeting to be called to allow the growers to vote. By the time the votes are counted, will the announcement regarding the successful candidate be made much before May?

However, a world tremulous with expectation will soon hear the result of the "election," and the only thing which will worry those most concerned is that this is another debit against the orchard registration fee, or case levy when collected.

### NOTICE TO FRUIT EXPORTERS.

Mr. Noel V. Wade, 8 Bridge-street, Sydney, who is the principal agent in Australia for the North of England Fruit Brokers Limited, wishes to notify the Australian fruit export trade that he has appointed Messrs. Murdoch Brothers Pty. Ltd. as agents for Hobart, Tasmania, for his Manchester firm.

## INSECTS AND FUNGI.

## Effective Control Methods.

Fruitgrowers, vignerons, and vegetable growers are ever on the alert to investigate and adopt the most approved methods for controlling insect pests and fungoid diseases.

For this reason the new "Cloudform" dusting system warrants most careful consideration. The principal features claimed in the dusting system are efficiency and economy:—(1) Efficiency, because the chemical contents are correctly compounded and do their work of pest destruction thoroughly; and (2) Economy, because the saving in costs and labor.

Details of the "Cloudform" dusting system are set out in an illustrated booklet issued by the Australian distributors, Messrs. Gibbs, Bright & Co., 27 Grenfell-street, Adelaide.

Summarised, the advantages are set out as follows:—Dusting is five times faster than spraying. Less labor is required; costs are low; one-third the weight; much lighter machinery; no trouble in mixing; no water to haul or pump; sufficient adherence to foliage; rapid protection at critical periods; various chemicals can be combined in their dry form, thus avoiding two or three sprayings.

The dusting powders include those for Codlin moth, Black spot, Cherry slug, Tomato insect pests, and fungoid diseases, Tobacco dusts, Thrip dusting powder, Citrus dusting powder for use during the hot months to destroy sooty fungus on Citrus fruit.

Dusting powders are also provided for many diseases, such as Peach leaf curl, Peach aphid, downy mildew and Oidium on vines, Potato pests and diseases, red spider. In fact, the whole range of pests and diseases with which the fruitgrower and vegetable grower now has to contend.

In the illustrated booklet referred to details are given of the Blower dust gun and mechanical dusting appliances for tractor, power or hand.

Illustrations are given showing the tractor duster at work in a vineyard, a hand-operated dust gun, and also vine dusting and power in a vineyard.

For large trees it is advised to dust with the drift on to one row of trees, and that when the drift changes, to dust on the other side.

A specially prepared arsenate of lead dust has been put up for use in Apple orchards, the ingredients fulfilling the demands of the British Health Authorities.

Copies of the illustrated booklet, giving full details, are obtainable gratis upon application to Messrs. Gibbs, Bright & Co., Adelaide.

## THE CLYDE "SIMPLEX" DRIER.

## No More Waste Fruit or Vegetables.

In another part of this journal appears the advertisement of the Clyde Engineering Company Limited, Granville, Sydney, illustrating the "Simplex" Drier in two kinds suitable for householders, small orchardists, or large factories.

The company has forwarded to our Sydney office the following samples of products treated by the dehydrating process:—Apples, Bananas, Sweet Potato, Flour, Parsley, Mint, Prunes, Green Peas, Soup Onions, Garfish, and desiccated coconut. These "samples" are put up in small cartons and judging by their appearance, seem to have come through excellently with the process of treatment.

By the use of the "Simplex" Drier, the present waste, particularly in fruit and vegetables can be converted into a high-class valuable commodity, with no more expense than the time it takes to put in the machine. The system of dehydration is reduced to its simplest and most economical form, and the products retain their original flavor, color and food values. Nothing is taken out but the water, and no preservatives of any kind are used.

Fruit and vegetables treated in this machine will keep indefinitely, and require no expensive tins or bottles.

The bulk is reduced according to the amount of water the fresh article contains. A ton of mixed vegetables, when dehydrated, will weigh only roughly three hundredweight. The machine requires nothing more than a small wood fire to work it. Is simple, self-contained, and practically automatic.

The "Simplex" Drier machine can be used for drying fruits, vegetables, fish, meat, copra, and other products.

The No. 1 "Simplex" Drier is despatched from the company's works in three packages, consisting of machine, firebox, and two lengths of piping wired together. The firebox contains the grating and a bag of asbestos.

The No. 2. "Simplex" Drier is bolted to the main body of the machine, and it is better to fix the flue pipes before putting the roof on as the illustration shows. A solid hardwood fire is best. Small wood causing flame is of no use for working purposes. Coke or coal can be used successfully, but on account of fouling the flues, it should be avoided if possible. Where available, a gas ring will provide all the heat necessary for perfect working.

For instance, such fruits as—Prunes, Apricots, Peaches, Raisins, Currants, Apples and Pears are the most suitable fruits to deal with, and all root

vegetables as well as Green Cabbage and similar food can be easily converted to a condition in which they will keep indefinitely, and transport in about a tenth of their original size. In fruits it is well to follow the standard methods of preparation as used in sun-drying.

Vegetables can be sliced or shredded and dry in about eight hours in this condition. In Prune drying it is advisable to use a fairly strong dip, and start drying at 130 degrees F. for the first four or five hours, then increase the temperature to 160 degrees. If the fruit is in good condition it will be dried sufficiently in from 25 to 30 hours. Where large quantities are being dealt with, it is economical to have two sets of trays, enabling dipping to proceed in readiness for the next charge.

Raisins and Currants, after dipping, take about 12 to 15 hours to dry, and retain a perfect color. Apples in rings, after sulphuring, take from six to ten hours, according to their texture. Pears take a little longer.

With vegetables a fine product is a mixture of Carrots, Parsnips, Turnips, and Onions. These should be shredded or sliced, and mixed after drying for use in soups, etc. Carrots and Green Onions give one pound dried to every ten pounds fresh. Parsnips, about one to five, white Onions, about one to eight. This is a very attractive line.

Generally, a temperature from 140 degrees to 150 degrees F. will be found suitable for vegetables and cut fruits; but Prunes, Grapes, Currants, etc., will stand 160 degrees with advantage.

It is advisable when the drier is properly set down, to light the fire and heat up to 150 degrees for an hour or two. This will assure the clearance of any odor of paint, etc., before fruit is put in.

It is necessary when dehydrating to start at a comparatively low temperature and after two or three hours it can be raised to the required degree without danger of injuring the tissues of the fruit. If a high temperature is used at first, the surface of the substance to be dried will coagulate and prevent evaporation and cause stewing instead of drying.

No definite table of times occupied in drying substances can be supplied. Many variations of size, density, ripeness, sugar content, climatic conditions where grown, and other factors make anything but approximate figures impossible.

Fuller particulars together with prices of the No. 1 and No. 2 "Simplex" Drier can be obtained from the Clyde Engineering Works, Granville, Sydney.



# Victoria.

Crop Prospects. Fruit Consignments.

Victorian Central Association Meeting. District Notes.

## CROP REPORT AND PROSPECTS.

Review by Department of Agriculture, Victoria.

### Deciduous Fruit.

IN a recent report the Horticultural Division of the Department of Agriculture states:—

There is a medium crop of deciduous fruit, but, owing to dry weather conditions in early summer, the fruit is below normal in size, particularly in cases where thinning was not practised with normally medium and small varieties of apples.

The leading commercial varieties are generally medium to fairly good, with the exception of London's and Rome Beauty. These varieties suffered from the attack of thrips.

Codlin moth gave evidence, during the dry spell, of becoming troublesome, and the advice given to growers to make special efforts to combat the early broods so that late sprayings can be reduced is being generally adopted.

### Viticulture.

January was a dry month in the vinegrowing areas. A little rain fell in the earlier part of the month, but not enough to be of much use in districts where irrigation is not practised. Here the vines are looking well considering the scanty rainfall they have had to do with. Good cultivation has in most vineyards mitigated the effect of rainfall deficiency; it is gratifying to note that our vineyards are now better worked than they were a few years ago. Nevertheless the berries are small, and unless copious rain falls soon the vintage will be a short one.

In the irrigated areas the vines look remarkably well though, as previously reported. Sultanas do not bear a heavy crop.

The dry conditions have been unfavorable to fungous growth, and vineyards throughout the State are very healthy and free from disease.

### Citrus Crop Medium to Light.

Since last report, there has been a marked dropping of fruit, in Valencia Late variety especially, in the Mildura area. This is attributed to hot winds and the protracted flowering, which resulted in the setting of fruit over a period of about five weeks. The crop can now be estimated as

light in Valencia Late, and medium to light in Navel varieties.

Fumigation is now being actively carried on at Merbein, Irymple, Murrumbidgee, and Shepparton. This work was delayed four weeks on account of the protracted flowering already alluded to. Trees generally are making good growth.

## FRUIT FOR SYDNEY.

### Big Consignment of Peaches and Pears.

Improvements Suggested by Mr. F. J. Churches.

THE need for better organisation of fruit distribution was emphasised in a report presented by Mr. F. J. Churches, who accompanied the recent special fruit train from Goulburn Valley to Sydney.

After loading at various stations, the special train arrived at Albury on 30th January; it consisted of 21 vans of Peaches and Pears, as follows:—2 refrigerated vans (iced at Shepparton); 1 Louvre van from Ardmona, to be transferred to a refrigerated van at Albury. The remaining 18 vans of fruit were to be carried by Louvre throughout to Sydney, thus to enable a fair test to be made of the advantages accruing from the different modes of transport.

In his report, Mr. Churches dealt exhaustively with the whole procedure and stated that the comparatively low returns were due to the fact that insufficient care was taken in the picking and packing; that 9000 cases of Elberta Peaches were placed at short notice was unfortunate; the market, which was already well supplied, owing to the fact that the fruit train of the previous day was late, and had missed the market with some 4000 cases.

Prices ranged from 5/- to 7/- for the bulk of the fruit, although it was hoped for 2/- to 3/- higher. Had the weather been adverse, complete disaster would have resulted, owing to the exceptionally large consignments.

Growers suffered from too much competition amongst agents. Tactical handling would bring improvements. They were an earnest body

of men, naturally anxious to clear stocks. A committee of agents had been formed. Growers sent to as many as 31 agents in one day.

Mr. Churches speaks most highly of the organisation of Mr. D. G. Wills, under which the bulk system of unloading and delivery is achieved. By this means growers avoid delays and reduce freight charges.

Mr. Churches' report was cordially received by a recent meeting of the Northern Victoria Fruitgrowers' Association, and his action in forming a committee of agents in Sydney was endorsed.

## TRESCO.

At the annual meeting of the Tresco Fruitgrowers' Co-operative Association Ltd. on February 20, the Chairman said last year's activities were satisfactory. The outlook for Doradillo growers had been bad, but was improving; growers had received £4 10/- per ton, and the United Doradillo Association hoped to sell the crop satisfactorily; stocks of Doradillo spirit were low. The Citrus crop had increased 100 per cent. The Lemon position was serious; tons of fruit rotted on the ground. The formation of a Lemon growers' organisation was necessary.

### Tresco District News.

Harvesting for the dried fruit crop is in full swing. Sultanas look well. Doradillos are showing good crops, although owing to setbacks insufficient manure has been applied. Research work is being carried on on experimental blocks under Mr. F. R. Read, a capable officer of the Department of Agriculture.

Beneficial results are expected from the concreting—now in progress—of the main channels by the Water Commission.

Fruit canning factories are now at the height of their activities processing Peaches and Pears. Great activity is manifest, and a large, high quality pack is assured.

## BAMAWM.

The complaints from settlers regarding seepage in the Bamawm irrigation area induced the Water Commission to attend to the lining of channels and the making of drainage channels, though it is found that the latter are now cutting across some of the growers' blocks.

A new problem has now arisen in the shortage of water from the Waranga Basin, as there are too many new avenues for the water.

(Continued on Page 157)

## Australian Fruit Essences.

By Better Protection the Essence Manufacturing Industry will be established, and much more fresh fruit will be used in the process.

Fruit Essence Export Trade Possible. Citrus, Deciduous, Berries, Pineapples

The Tariff Board heard evidence on December 17th, regarding the application by the Australian Essence Manufacturers' Association for increased duties.

Mr. J. L. Moore represented the Association, and said that no secondary industry had greater claims for an adequate Tariff protection than the essence manufacturing industry, which absorbed many tons of fruits, such as Lemons, Oranges, Raspberries, Strawberries, Currants and Pineapples, and many thousands of gallons of Australian distilled sugar. But the natural expansion of this industry was retarded by the excessive excise Tariff, and inadequate protection, which encouraged large importations of essences from overseas. The whole of these could be manufactured in Australia.

Between June, 1922, and June, 1924, the importations of essences, fruit ethers, aromas and flavors had increased by £21,000 a year. The competition of the imported article was growing keener, but under existing conditions, it was difficult for the local firms to successfully meet it. The wages and conditions in England and Australia differed very materially. The awards showed that females received from 18/- to £2 a week in Victoria, compared with from 11/6 to 28/6 in England, while for males in Victoria, the wages ranged from £1 to £4/4/- a week, compared with from 12/- to £2/13/- in England.

The essences were largely used in the preparation of aerated waters, confections and jellies, and the quality of the local article was declared by many local manufacturing firms to be equal to anything imported. With an adequate protection, overhead costs, brought about by the increasing importations, would be reduced, and the manufacturers would be able to exploit the markets of New Zealand and the East, where there were considerable opportunities.

In the past ten years, it was estimated that the area under fruit had been increased by 85,455 acres.

Evidence in support of the application was also given by Messrs. W. J. Foster, R. E. Boardman (Hon. Sec. Australian Conference of Fruitgrowers and editor "Fruit World") W. E.

Jones (Silvan), H. Henderson (Mount Evelyn) and W. Evans (Monbulk) on behalf of the fruitgrowers.

Support from New South Wales.

The hearing was subsequently held in Sydney on January 18th. Mr. E.

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E. Herrod, Secretary of the Fruit-growers' Federation in New South Wales, and H. G. Such, manager of the New South Wales Central Citrus Association, gave evidence in support of the application.

**ESSENCE MANUFACTURING  
INDUSTRY.**

Better Protection Necessary.

The Committee appointed from the Central Fruit Growers Association to

work in conjunction with the Australian Essence Manufacturers' Association have held meetings and definite results are hoped for.

A convincing case has been made out in favour of assistance being given to this industry, as on account of its potential possibilities of consuming large quantities of Australian fruit its encouragement is of great importance to fruit growers and to the country in general.

It is surprising to realise that essence manufacturers who require to use rectified spirits of wine for the extraction of flavors are penalised by the Government to the extent of 5/6 per pint excise duty. How any industry can be expected to make any headway in the face of such taxation is perplexing.

The perfume industry is allowed rectified spirits of wine at a very much lower rate and users of Australian fruit for essence manufacture should at least be put on the same basis. Furthermore with perfumes there is a heavy import duty against the imported product, whereas with essences the import duty is practically offset by the heavy excise duty imposed on the necessary spirits.

Fruit growers in all districts should carry these facts in mind and take every opportunity that occurs to ask their Federal Member to use their influence to have this anomalous state of affairs rectified.

**AN APPRECIATIVE NEW-  
ZEALANDER.**

The Editor, "Fruit World."

Sir.—Will you kindly allow me to express through your columns, my great appreciation of the kindnesses shown to me by the officers of the Departments of Agriculture in Victoria, New South Wales and Queensland, with whom I came in contact when on my recent tour of many fruit growing parts of the three States referred to.

Through the courtesies shown me, my trip was made exceedingly interesting and educative, and I return to New Zealand with the greatest admiration for my fellow officers in Australia, and lastly but not leastly, Mr. Editor, the kindnesses you personally extended to me were appreciated more than my pen can tell.

I am, etc.,

P. Everett,

Orchard Instructor,

Dept. of Agriculture,

4/2/26.

Whangarei, N.Z.



## Queensland.

### Activities of the Committee of Direction. Leaf Spot on Bananas.

FOR the information of all interested in fruit marketing, the following resume of the activities of the Committee of Direction of Fruit Marketing has been courteously furnished by the Manager (Mr. W. Ranger), under date Feb. 2nd. Thus:

Unrestricted marketing is now on its trial on the Brisbane and southern markets, and upon its success or failure depends the re-establishment of the policy of limitation of agents. In the meantime, the Committee of Direction of Fruit Marketing is actively engaged in wholesale and retail activities in Brisbane. A wholesale fruit and vegetable agency has been established on the Brisbane mar-

ked the Committee to take full control of the crop. Notice of intention to issue directions regarding Pineapples and Strawberries has therefore been given in accordance with the requirements of the amended Act. Such directions can be challenged by any 30 growers demanding a poll within thirty days of the issue of such notice, but up to date, no request has been made.

Considerable benefit has been derived by the deciduous growers of the Stanthorpe district this summer from the arrangement made by the Committee for the disposal of the whole of their surplus production of Plums and Peaches, and portion of their surplus production of Apples. Satisfactory prices were obtained from the jam and canning factories, and prices from the fresh fruit market have been greatly enhanced. The deciduous growers have benefited largely through the retail activities of the Committee also, and Stanthorpe is experiencing the best season known for a long period. Production is heavy and prices good.

During the summer season the Committee transports

about 1,700 tons weekly

of Queensland fruit and vegetables, but up to this season has not made any special arrangement for transport to the North of Queensland. This is a difficult problem, since the fruit enters the tropics 396 miles from Brisbane, and travels through increasing temperature to Cairns, 1,042 miles from Brisbane. Experiments were first conducted with iced waggons. The first two were unsuccessful, and a large proportion of the fruit was lost. A third attempt resulted in the fruit arriving in splendid condition, but it was necessary to ice the truck every hundred miles to maintain a temperature of 60 degrees Fahr.—a prohibitive proceeding. As a result of these experiments, the Railway Commissioner has agreed to run a through train at passenger train speed to Townsville and Cairns, and it is believed that fast transport with louvered trucks will prove more satisfactory than transport in iced waggons.

The Western district (Toowoomba to Cunnamulla) is being specially catered for by a special truck service weekly. Station masters collect

orders, and the fruit is being supplied by co-operative marketing Associations.

As a result of the High Court decision and consequent amendment of the Fruit Marketing Organisation Act a revision of the constitution of the organisation is being made. It is felt that the present committees are too cumbersome and costly, and local associations are being circularised for an expression of opinion.

#### LEAF SPOT ON BANANAS.

In order to prevent any misconception or any undue anxiety regarding the presence of the leaf spot on banana plants that made its appearance in many parts of coastal Queensland towards the end of last summer and continued to extend during autumn, the following information regarding the outbreak is offered for the benefit of banana growers:—

The leaf spot is caused by a microscopic fungus closely related to the

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ket, and several retail activities opened in conjunction with such section. These latter consist of two fruit shops in the Valley (the busiest shopping centre in Queensland), two fruit stalls in other parts of the city, and five fruit barrows. They have been highly successful, and do a large and increasing turnover weekly. The fruit and vegetable section is growing rapidly.

The Pineapple arrangement, whereby the whole of the canned Pineapple output for twelve months was sold to one distributing firm, has been very satisfactory, and negotiations will soon be initiated for a renewal of such arrangement on the basis of an increased price.

The Strawberry growers are anxious that the Committee should handle their jam berries, and have request-

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shot-hole fungus of stone fruits, the spores of which are carried by wind and, under favorable conditions of heat and moisture, germinate when they come into contact with a banana leaf. The spots characteristic of the trouble then make their appearance. They increase in size, the leaf-tissue is ruptured, and finally the whole leaf is affected and dies. The oldest leaves are the first to be attacked, and in severe cases every leaf is destroyed, and nothing but the bare pseudo stem of the plant is left with the bunch entirely unprotected. Where the fruit is well developed there is little loss, as it can be marketed, but when the bunch is immature the fruit will not develop and is valueless. Sometimes the bunch falls right out.

Where the pseudo stem has not produced all its leaves the damage is not

usually so acute, as the plant may recover and throw a bunch which will not, however, carry fruit of the best quality, but smaller fruit of marketable size. The trouble is of a purely seasonal nature, and may not reappear for some time, for at present it is dormant and may continue to be so until conditions are more favorable for its development. Plants that were badly affected are now producing new leaves that show no sign of the trouble. At the same time growers are strongly advised to keep a very careful watch for any reappearance and to take precautions for preventing it again becoming a menace to the Banana industry.

The precautions to be taken are of a preventive, not a curative nature, and are similar to those in use in the case of diseases, such as Irish Blight of Potatoes or Downy Mildew of the Grape, with the exception that the fungicide used is to be applied in the form of a dust instead of a spray, as the latter is not practical in most of our Banana plantations.

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The application of a copper lime dust by means of a dust gun is recommended, the work to be carried out in the early morning or evening when there is no wind, and preferably when the leaves are moist with dew. The dust should be applied as soon as the first traces of spot are seen, and should be repeated when necessary, so that the young leaves may be protected when they make their appearance. Copper lime dust and dust guns will shortly be obtainable in Brisbane.—A. H. Benson, Director of Fruit Culture, in Queensland "Journal of Agriculture."

Fame has torn down a man's house to build his monument, but honour is the reflection of right. And this intangible reflection will stand until success comes, and it will remain for ever.

## Answers to Correspondents

**Prune Crops.**—"J.J.E." Shepparton, asks.—"Could you let me know what the crop of Prunes is likely to be in South Australia and New South Wales, also in other parts of Victoria? They are very light in Shepparton district."

**Answer.**—Advice to hand from Department of Agriculture, Adelaide, under date 23rd January, states that although all districts report Prunes to be more plentiful than mixed Varieties of Plums, the crop of Prunes on the whole must prove much below the average yield—about 50 to 60 per cent. of an average crop. According to South Australian Government statistics, the average production for the past five years has been about 174 tons of dried Prunes and Plums.

The Victorian Department of Agriculture reports under date 26th January, that the prospects of the Prune crop in Victoria are fair to medium. At Shepparton, the d'Agen, an extensively planted variety, is very good. The Robe de Sargent is also good, while "Ardmona French" is light; this latter variety is also largely planted. The Goulburn Valley, however, produces the bulk of our Prunes, and other districts report a light crop.

The Felleberg, Sugar and Silver, are light in all districts, but these varieties are not largely grown.

**Passion Fruit.**—A.L.R., Narara, N.S.W., writes:—"I would like some information regarding the Mexican Passion Fruit. Is the 'Mexican black,' or 'Mammoth' passion vine, the same plant under three names, or are they different varieties? Are they grown for commercial purposes, and can they be grown in the same climate as the ordinary common passion vine?"

**Answer** (by W. J. Allen, Department of Agriculture, Sydney).—The Mexican Passion Fruit was fairly extensively advertised some time ago by, it is understood, the same person who put the Loganberry on the market under the name of Caringberry.

The Department does not recommend the commercial cultivation of any variety of Passion Fruit except vines are to be found growing in this the common. The so-called Mexican so profitable, and very few of these and other varieties have never proven State.

**Answer** (by J. M. Ward, Supt. of Horticulture, Victoria).—As far as is known, the true Mexican Passion Vine (*Passiflora ligularis*) is not cultivated in this State. Varieties of *Passiflora edulis* have been grown under different names, including "Mammoth," "Invicta," "Renown," and "Black Mammoth." None of these

varieties of *edulis* are as good as what is known as the Common Passion. The larger varieties are mostly shy croppers and produce many so-called "duds." Doubtless there is considerable confusion in the nomenclature of many of our cultivated fruits, the same variety being grown under different names and distinct varieties grown under the same name.

**Answer** (by A. McCully, Wandin).—Re your enquiry as to whether Mexican, Black or Mammoth Passions are three separate varieties, I have to say that Mexican and Mammoth are one variety, better known in this district as Queensland. They are grown successfully in some of the lighter soils and lower hills of this district, and some growers with that class of country prefer them to the Black. They are not a success on the high red soil hills, as being larger fruit they require more moisture.

The Passion crop this year is very light, and rain is badly wanted, as at present the vines are dropping their buds.

At a recent meeting of the Barmera Branch of the South Australian Bureau of Agriculture (recorded in the S.A. "Journal of Agriculture"), a question box was conducted. In each case the replies were furnished by Mr. B. Gregory.

### Budding Orange Trees.

Orange trees have shot below the bud whilst above the tree has died. When is a good time to bud them?

**Answer:**—About Christmas time, when the sap is running, and for about two months.

### Manurial Practice.

When dressing ground with superphosphate, what is the best method of doing so? Is the practice of sowing it down the middle of a row a bad one?

**Answer:**—It is advisable to distribute it thinly. The best plan, however, is to obtain an attachment which will permit of the super being placed in every furrow rather than one. All of the roots are then catered for instead of a section of them only.

### Apricots and Gordos.

A member stated that he was working a block in which there were Apricots and Gordos planted together. The Apricots were neglected. He proposed pulling out the Gordos. Would it be advisable to prune the Apricots and pull the vines out now?

**Answer:**—The reply indicated that the Apricot and vine did well together, and it would not be any advantage to pull them out, as neither would suffer because of the other's presence. The root systems were different. It was far better to prune neglected Apricots now than leave them until next year.



## Tasmania.

Export Total Nearly 1,750,000. Reorganising Agricultural Dept.

Seasonable News and Notes.

By Our Correspondent.

**T**HE season continues dry; very little rain has been experienced since the new year; a good fall would be welcome in most districts.

The early varieties of apples are now being harvested and shipped to interstate and overseas markets. Owing to the dry weather, fungus disease is not in evidence, the fruit which is coming forward being of excellent quality, fine colored, and free from disease.

During February, strong northerly winds caused some damage in certain districts. This was, however, limited to the larger and early maturing varieties. Amongst the pear varieties, the "Williams" suffered worst, the wind occurring just as the fruit was maturing and fit for picking.

### Overseas Shipments.

According to the figures supplied by the agents, this season will eclipse all previous records for "overseas" apple exports. Approximately, 1,500,000 cases are booked to be shipped from Hobart, whilst quite 250,000 will be forwarded from Northern centres via Beauty Point.

The total shipments will be in the vicinity of 1,750,000 cases. The previous record shipment was in 1923, when the consignments totalled 1,560,000 cases.

### Apple and Pear Grades.

In spite of the recommendations of the Conference of Ministers of Agri-

culture and Australian Fruit Council for the amendment of the apple and pear grades to a more practicable basis of operation, the Customs Department decided to ignore such representations and still maintain the old "Plain" grade, with its absurd provision for 30 per cent. of blemished fruit.

At a meeting of the State Fruit Advisory Board, held recently, members expressed strong resentment at the treatment that had been accorded to the industry in this respect.

The proposed amendments were fully considered at the Ministers' Conference, and endorsed by the different officers representing the State fruit industries that were in attendance.

As the duty falls upon these officers to demonstrate and instruct growers as to the requirements of the different grades at the orchard or packing shed, the invidiousness of the position will be fully understood.

The grades for interstate trade have been made uniform with the Customs grades, except that a fourth (C grade) is added, which allows every fruit to carry a slight blemish.

Growers are recommended to pack their fruit for interstate export into either "Special," which provides for fruit of extra quality and color; "Standard," which must be clean fruit,

except there is a 10 per cent. allowance of slight blemish for human error in packing; and C grade, which limits the blemish allowance on any fruit to a half-inch aggregate. The "piebald" Plain grade is only retained with the hope that some day it may be amended as desired, thus bringing complete uniformity in grading and branding.

### Arsenic Scare.

This matter is still being given prominence in both the English and Australian press, and has been productive of many wonderful and alarming theories. One day we read that a scientist has stated the arsenic is in the fruit, and that washing or peeling is no safeguard; the next day this is contradicted, and growers are advised to wipe their fruit before packing and exporting. Meanwhile the buyer who is operating is able to use the reports as a useful medium to obtain his purchases at a considerably cheaper f.o.b. price.

So far as Tasmania is concerned, the majority of growers finish their spraying for codlin moth at the end of December. This gives the fruit over seven weeks' exposure to rain, wind and sunshine after the last spray is applied. A carefully prepared statement detailing the Tasmanian practices, together with analysis of fruit that has received the maximum treatment, is being forwarded in advance of the first shipments.

### Reorganising Agricultural Department.

Dr. Cameron's report as to his recommendations for the reorganisation of the Department of Agriculture has now been presented and published. The report is principally confined to the cereal, pastoral and root crop industries, which are generally acknow-

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ledged to be in an unsatisfactory condition.

The Doctor gives us a modicum of praise as to the position of the fruit industry, but considers that this can be strengthened and extended by more educative propaganda. The centralisation of the supervision of orchard pests in the Agricultural Department is recommended, such supervisors as are necessary being a valuable means of demonstrating and instructing in advanced methods of culture.

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A scheme on similar lines to that recommended has been urged by the Fruit Expert (Mr. P. H. Thomas) for some considerable time. The recommendation of Dr. Cameron will strengthen this and dispose of a lot of prejudice that has been in evidence.

**Apricot Shot Hole Fungus.**

Tests which have been carried out by the Department of Agriculture this season for the control of this fungus have proved the efficacy of a strong Lime Sulphur or Burgundy mixture applied during August.

An experimental plot was arranged at Mr. C. H. Newman's orchard, Bagdad, on a portion that had been much affected with shot hole in previous seasons. The majority of the trees in the check rows which were untreated carried practically no fruit, the small amount in evidence being badly scarred and distorted with the disease.

Adjacent rows treated with Burgundy mixture (6 lbs. copper sulphate, 4 lbs. soda, 40 gals. water) formula bore heavy crops of clean, well developed fruit, the difference being most striking.

In 1925 very little fruit off this area was fit for marketing; the balance of the orchard was treated with the Burgundy mixture, and produced a splendid crop of fine quality fruit.

**Fruit Shows—March.**

Lilydale (N.E. Tas.)—20th March.  
Moonah (Glenorchy)—25th March.  
Exeter (W. Tamar)—27th March.  
Kettering (Channel)—27th March.

**Small Fruits.**

The small fruit harvest is now completed. On the whole, crops turned out much better than was expected. Several good rains were experienced in southern districts during January, which saved the situation when matters looked serious.

The quality of the fruit was generally good, and a larger number of growers took advantage of the higher prices ruling for fruit picked in punnets. This is generally used for canning purposes, the product finding a ready sale upon the Australian markets.

**Sydney Agents' Committee.**

During the month Mr. A. J. Cooper, President of the Sydney Committee of Agents, visited Tasmania for the purpose of meeting the State Fruit Advisory Board and discussing future action upon the N.S.W. markets.

A very interesting meeting took place, when Mr. Cooper seized the opportunity to emphasise the weaknesses which were apparent to his committee in the general packing and forwarding of the Tasmanian fruit. The Tasmanian Fruit Advisory Board is now officially recognising the Sydney Committee of Agents as the body representative of Tasmanian interests upon the Sydney markets.

**Obituary.**

It is with deep regret that we record the death of Mr. J. G. Shield, one of the most prominent Tasmanian orchardists. Mr. Shield was responsible in establishing two very fine apple orchards at Huonville, and had the honor of filling the two premier positions in civic life as Mayor and Warden of the Port of Hobart.

**STATE FRUIT ADVISORY BOARD.**

A meeting of the State Fruit Advisory Board was held at Hobart on 9th February.

Present: Messrs. Neil Campbell, M.H.A. (chairman), F. Peacock (H. Jones & Co.), A. E. Webb, H. Hamilton, J. H. Astell, B. J. Pearsall, F. Cole, W. H. Calvert, M.L.C., V. J. Skinner, A. Davies, and Secretary P. H. Thomas.

**Pears Instead of Apples.**—A report was received from Messrs. George

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3, 4 and 5, The Arcade.  
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G.N.R. Potato Market, King's Cross, N.1.  
18, Stanley Street, Liverpool.  
(Facing Commercial Sale Rooms.)  
Deansgate, Manchester.  
17, Humber Street, Hull.  
Southampton Docks.  
(Facing No. 45 Shed).  
202/4, Franklin Street, New York, U.S.A.  
South West House, Greenmarket Sq., Cape Town, South Africa.

Munro Ltd., London, concerning the case of substitution of pears in an apple consignment from a grower at Bagdad.—This was referred to the original sub-committee for reply.

**San Jose Scale.**—Mr. Pearsall moved, Mr. W. H. Calvert seconded—

That this Board regrets the attitude of the Launceston Fruit Board in declining to continue the control of the San Jose Scale, and considers that each Fruit Board or Council should bring in regulations to control the different pests. The Board



also regrets that it cannot support any claim for a subsidy.—Carried.

**Overseas Export Grades.**—On the motion of Messrs. Pearsall and Davies it was decided—

"That this Board again requests the Customs Department to give effect to the recommendations of the Australian Fruit Council and Minister of Agriculture for the amendment of the Plain grade to a more practical basis of operation."

**Circular to Victorian Orchardists.**—

Mr. Calvert moved—

"That this Board strongly resents the reflections which have been passed upon the Tasmanian industry in the letter forwarded to Victorian orchardists, and requests that a complete withdrawal of such, as being quite incorrect and unwarranted.

Mr. Webb seconded the resolution, which was carried.

**Shipment per S.S. Bakara.**—A communication was read from the agents of the Commonwealth Line in respect to the alleged delay of unloading consignments from that vessel during the 1925 season.

**Export Periods.**—Mr. Peacock moved, and Mr. Astell seconded—

"That the Honorable the Minister be requested to keep the matter of limitations of fruit imports to the United Kingdom before the authorities with a view to its final adoption. The Board also would like to express their appreciation of the Agent-General's efforts and assistance in the matter.—Carried.

**Sydney Committee of Agents.**—Mr. A. J. Cooper, President of the Sydney Committee of Agents, then addressed the Board regarding the experiences and recommendations of the Committee in respect to Tasmanian fruit upon the Sydney markets. A vote of appreciation and thanks was passed to Mr. Cooper.

**Arsenic Scare.**—On the motion of Messrs. Astell and Pearsall it was decided—

"That this Board fully endorses the report as submitted by the Fruit Expert concerning the application of arsenical sprays in the production of Tasmanian fruit be forwarded to the Agent-General for his information."

Tasmania finances her Fruit Advisory Board by a levy of 1/16 of a penny on every case exported, and 1d. per cwt. of fruit processed. This yields about £750 per annum, and enables the organisation to function effectively.

## Apple Spraying with Arsenate.

(Contributed to the Fruitgrowers' Cool Stores Association of Victoria by Mr. J. H. Young, Tyabb.)

**I**N average orchard practice the mixture is 1 lb. of lead arsenate and 20 gallons of water, or, say, 1 oz. to 12½ lbs. This is equal to 350 grains of lead arsenate to 70,000 grains of water—1 gallon.

The area covered by one gallon depends on the distance the operator stands from the object and the particular nozzle employed. Experiments lead to the conclusion that at 2 feet a gallon will wash an area of, say, 1000 sq. feet. At 10 feet the same quantity will wet an area of 10,000 sq. feet. Both of these conditions occur in average spraying, with the result that some fruits are drenched, some sprayed with misty globules, and some are untouched, and these are the conditions under which the fruit is picked.

The British regulations require that not more than 1/100 of a grain of arsenic shall be found on one pound of apple. How can that be met? The following data is a working basis:—

Assuming that the result of an average spraying is one gallon to 5000 sq. feet, the amount of lead arsenate will equal 1/2000 of a grain to the sq. inch. A 2½-in. apple presents, say, 5 sq. inches to the spray, equal to 1/400 of a grain on each apple. But as arsenate of lead contains only one-third of arsenic oxide, each 2½-inch apple will hold, say, 1/1200 grains of arsenic oxide. Four 2½-inch apples weigh 1 lb., then 1 lb. of apple will contain 1/300 grain of arsenic oxide. As the regulation prescribes "Not more than 1/100 grains to the pound," the orchardists are within quite safe limits.

In practice, however, the figure (1/1200 grain to each fruit) is never obtained. Missing the spray, weathering, leaf-rubbing, and the necessary handling reduces the poison liability to at least one-fifth, so that it will require 1500 lbs., or, say, 37 bushels to provide one grain of arsenic oxide, the official dose of which is 1/60 to 1/15 grain—25 to 100 lbs. of apples. Those who use the quantity recommended on the label—1 lb. to 25 gals.—have less figures than those given above.

Dr. MacFadden, of the British Ministry of Health, recommends that scientific methods should replace the chemical poisons. Can that be done?

Possibly: lures and traps used throughout the season, a systematic gathering up of fallen fruit, and two lead arsenate sprays before the end of December will do much to lessen the complaint.

## FIGHTING INSECT PESTS.

### Cutworms.

The dry season is responsible for the appearance of numerous cutworms in orchards. For further particulars re this pest, see "Fruit World," February 1st, 1926, p. 92.

### Scale Insects of Fruit Trees.

See "Fruit World," February 1st, 1926.

### Codlin Moth, Painted Apple Moth, Loopers (Moths).

See "Fruit World," January, 1926.

The larvae of the **Light Brown Apple Moth** are very numerous at present. These insects cause growers of "Yates" Apples much concern, as they appear practically all the year round. See "Fruit World," January, 1926.

Codlin Moth larvae are now commencing to pupate in the hessian bandages and under the bark, examine trees frequently, and destroy larvae. Dip bandages in boiling water to destroy larvae and chrysalids. Remove all loose bark and destroy same.

### Bryobia Mite and Red Spider.

The continued dry weather has caused these mites to spread rapidly, and the leaves of Apple and other fruit trees are turning a yellow-looking color, and are dropping prematurely. It is necessary to thoroughly spray the underside of the leaves, placing the spray nozzle fairly close to the leaves. For remedies, see "Fruit World," February 1st, 1926, p. 92.

### Woolly Aphis.

Owing to the dry weather these insects are spreading rapidly in quite a number of orchards. The *Aphelinus* parasite is making great headway in many orchards, and is keeping this pest well in hand. The Ladybird larvae are numerous this month, and are also busily engaged destroying the Woolly Aphids.

Spraying should be continued where *Aphelinus* have not yet been liberated. For remedies, see "Fruit World," February 1st, 1926, p. 92.

### Apple Root Borer.

In some orchards Root Borers are still to be found on Apple trees. When the late spray for Codlin and Light Brown Apple Moths is sprayed on the trees, most of these insects will be destroyed.

## Wine Grapes for Australian and Overseas Markets.

### Varieties and their Characteristics

In the course of an address regarding Wine Grape culture, Mr. C. Pollitt, at a recent meeting at the Lone Pine Branch of the South Australian Bureau of Agriculture, gave some valuable hints.

The lecturer said:—

**M**ISTAKES IN PLANTING had been made in the past, and were still being made, and a little timely advice on the most suitable varieties might save growers from costly errors. As an instance of past mistakes, mention was made of the Sercial growers, who had made extensive plantings of that variety until the Barossa district was overloaded with a Grape that was only suitable to rich, moist soil, it being a bad doer on any soil inclined to dry out. In many vineyards it was an unprofitable Grape to grow; and even on suitable soil it was less profitable than many other varieties.

Unfortunately, the Sercial Grape furnished one of the poorest classes of wine the makers had to deal with. It gave a thin wine of too pronounced and unpleasant flavor for light white wines, furnished an equally unsatisfactory Sherry, and was too thin for making into a Sweet White. In price it would never rise higher than a poor distilling value, and it would pay all growers either to grub it out or graft it over to Sherry or Madeira.

Before doing the latter, however, it would be wise to test the Sercial out by experiment as a

#### Stock for Grafting

on, otherwise it might be found to furnish an unsatisfactory stock which in the end might have to be grubbed out.

The Sherry and Madeira could well take the place of Sercial. There was a comparative shortage of both of those varieties, particularly of Madeira. Both of those Grapes reached high sugar densities, and could be put to profitable use at the wineries. The Sherry furnished a good full bodied wine of a Sherry type, and also made a useful sweet wine. The Madeira, although too highly flavored for a Sherry wine, made one of the best quality Sweet Whites. It gave a beautifully flavored wine, which would always command a ready sale, and also it was most useful for blending, especially with White Ports.

Each of those two sorts bore heavily, and were capable of reaching high sugar densities. This was an important point, because any future vintage might see a general adoption of the method of purchasing Grapes on their sugar contents.

Muscatel in Barossa should be grafted over to one of those two varieties. The Muscat set badly, and was very liable to Black Spot, and as a much heavier bodied Muscat wine could be produced on the Murray areas, there was no need for the makers or growers to worry about it in that district.

### T. STOTT & SONS Fruit Merchants

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A Trial Consignment solicited from Growers in all States.

Prompt Settlement.

11 WESTERN MARKET,  
Melbourne

Frontignac was good, but there was only a limited market for that type, and as it was also very susceptible to spot, there was no need to plant it when they had

#### More Satisfactory Varieties

to choose from. Reisling, especially that grown on sandy slopes, would always be in demand for good quality Hock, and its price would always be near the top. It was somewhat liable to spot, and particularly to oidium when that disease was prevalent.

In Black Grapes, two varieties were most prominent. They were Shiraz and Grenache. The Shiraz furnished the foundation of all Ports and Burgundies, and was a Grape that no winemaker could do without. On good soil it paid handsomely, and no one need fear over-planting of that variety. Grenache came next in importance.

All through Barossa they were short of Grenache, which would always be in good demand owing to it being so useful in Port blends. It furnished a good flavored wine of a Port type, not so rich as Shiraz, but maturing quicker than any other red wine. That gave it a distinct value in winemaking, because it assisted to hasten other wines forward, and for that reason would always be in demand at fair prices.

Too many growers were turning down Mataro in place of Morrastel. That was a mistake, because although Morrastel was a more consistent bearer, it did not produce the quality of wine that Mataro gave, which at best was second grade, being below Grenache. However, the Mataro was

**Invaluable for Blending,** either in sweet or dry wines, and so long as there was a wine industry, the Mataro would be needed.

The Morrastel did not reach the same density as Mataro, nor was it so hardy, and the next drought would give some growers a good illustration of that fact. There was sufficient Pedro Ximenes in Barossa to meet requirements, and as for sweet wine, extensive planting would probably cause a drop in price. White Hermitage was generally a disappointing Grape from the winemakers' point of view. In Barossa it always fell short in sugar contents, and makers would soon refuse that variety if pushed on to them in large quantities.

For safe planting, the grower who intended laying down a vineyard could not go wrong in planting Shiraz, Grenache, Mataro, Sherry, and Madeira. Those made enough variety for any vineyard, and they had the advantage of ripening one after the other throughout the vintage.—S.A. "Journal of Agriculture."

#### SCIENCE INSTITUTE.

#### Sir Geo. Knibbs resigns.

The resignation of Sir George Knibbs as Director of the Institute of Science and Industry, has been tendered to the Government.

Sir George was appointed to the Directorship for five years as from March 18th, 1921, at a salary of £2,000 a year. Previously he was Commonwealth Statistician.

The question of filling the position vacated by Sir George will be considered by the Cabinet at an early date, also the proposed reorganisation of the Institute.



Australasian Representative :

**H. G. COLOMBIE**

Temple Court, Melbourne

Phones: F3284 and J1223

Telegraphic Address: "Columbine," Melb.

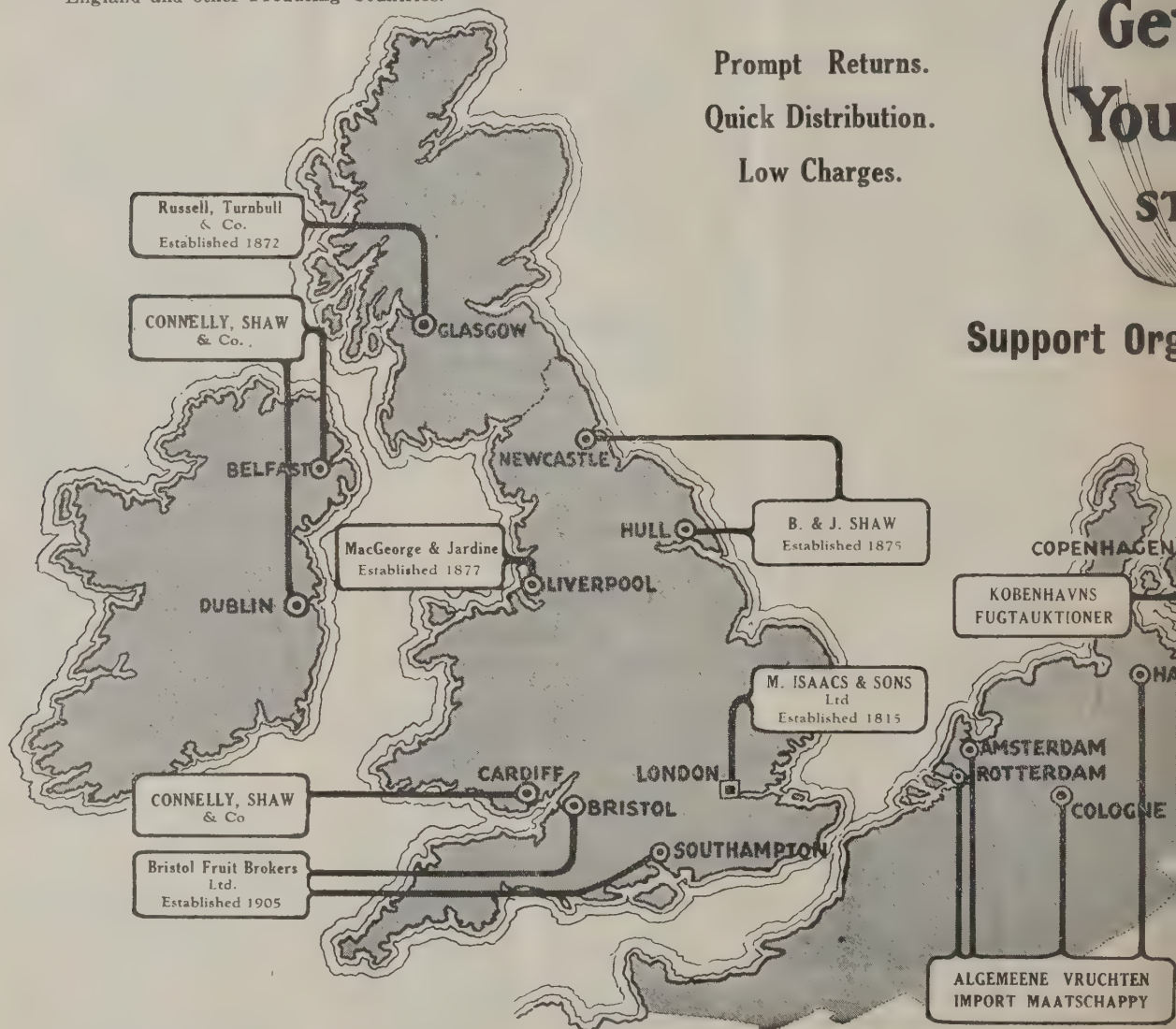
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# T MARKETING

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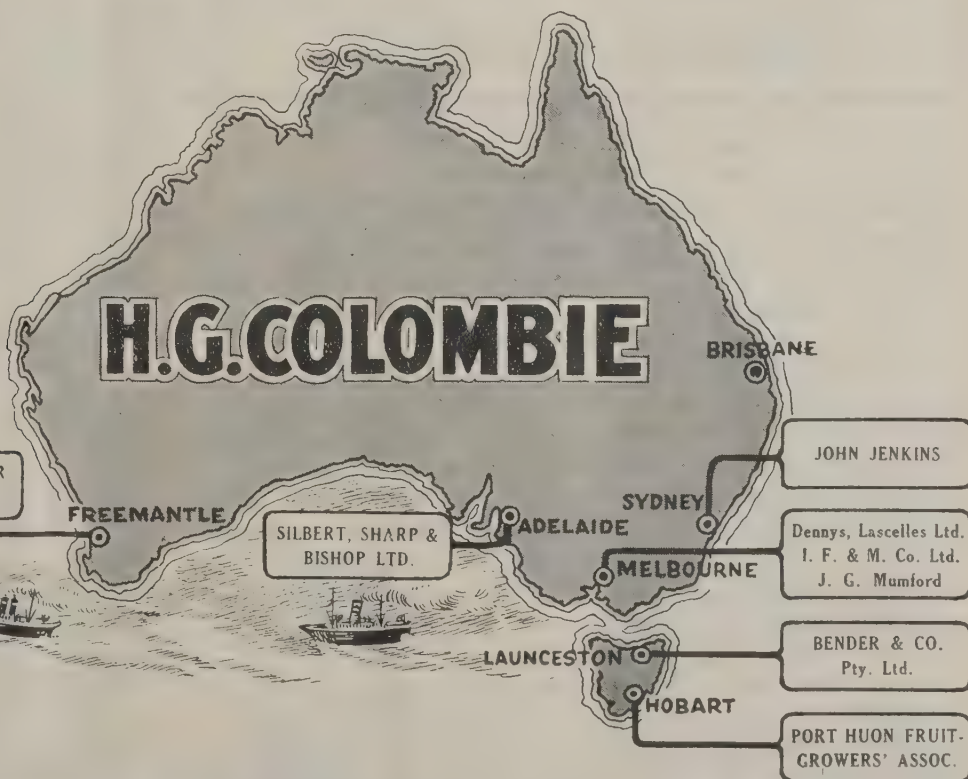
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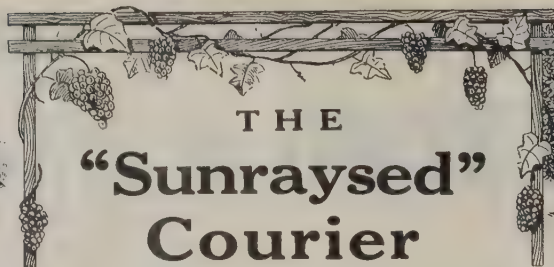
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## THE "Sunrased" Courier

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#### Appraiser and Publicity Officer:

W. P. Caro.

## Growing Currants

### How to Avoid Having Red Berries.

#### Leaf Pruning is Advocated.

(By Oscar Weste, Renmark, S.A.)

ONE OF THE PROBLEMS that confronts the grower of Currants is—How to produce a sample, free from red berries. It has been proved by last year's experience that although the London market will pay a fair price for good, even colored Black Currants, they will not buy a "piebald" sample at any price.

Last year's sample (owing to adverse climatic conditions) was not good, and the result has been reflected on our unsatisfactory returns.

Mr. Lyon, of the Merbein Experimental Farm, has been experimenting for some time with a view to obtaining an even sample, and obtained good results by means of leaf pruning for the purpose of allowing light to penetrate to the centre of heavy foliated vines.

In the course of a lecture in Renmark recently, he explained that the coloring of the skins was a pigment produced by light, and in the absence of sufficient light berries remained green and red.

There were two ways, he said, of admitting light.

One method was to cut back the

heavy foliage, and the other was to remove a few of the large basal leaves.

He did not recommend drastic cutting back or topping, as this defeated the end in view. Inasmuch as it deprived the vines of too many of the leaves which are so necessary for the proper sugaring of the fruit. But by removing some of the large basal leaves, light was admitted without in any way interfering with the proper balance of the vine.

Following on the lecture, a practical demonstration was held on Mr. Dorrington's block on January 6th, which was attended by about 30 growers. Growers were split up in groups, and under Mr. Lyons' supervision, leaf pruning was carried out, and the knowledge thus gained enabled settlers to carry out the work on their own block, a marked difference was noticed in the coloring of otherwise uncolored fruit.

If this simple process is going to help towards obtaining a good sample, the practice will soon become general.

Another cause of red berries was discussed at the Renmark branch of the Agricultural Bureau recently, consequent upon a lecture by Mr. Cole on Spanish methods of growing and marketing Raisins. The cause of red berries was considered to be due to allowing weak shoots

to produce weak bunches, which failed to fully mature. These should be disbudded in the spring, and allowing only the spur buds to grow.

Mr. Cole said that drastic disbudding was practised in Spain in the spring time.

This leads me to believe that, just as the disbudding of the Sultana is becoming more a practice year by year, so the disbudding of all drying varieties of vines will become a necessity, to enable us to produce an article to compete with the countries of our competitors.

### A.D.F.A. CHAIRMAN VISITS THE WEST.

Mr. H. D. Howie, Chairman of the Board of Management, visited Western Australia, and conferred with growers in the Swan Valley regarding the marketing of their 1926 season's crop of Currants.

Proposals were put forward whereby the West Australian growers would export a percentage of their crop, and at a meeting of growers, held on Monday, 26th January, the proposals put forward by Mr. Howie were adopted.

About 50 growers attended the meeting, and a committee of five were appointed to canvass growers with the object of getting a signed contract. It was agreed that the contracts had

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5 Hoddle Street (2 doors from Victoria Parade), Collingwood, Melbourne.

to be signed by growers representing 90 per cent. of the Currants produced in Western Australia for 1926; otherwise the scheme would not be proceeded with.

It is to be regretted that the growers in Western Australia have refused to sign the contracts, and the question of marketing Currants in the Commonwealth for the 1926 season is now considered a very urgent problem.

#### GOOD PRICES ANTICIPATED FOR STONE FRUITS.

A cablegram, dated 16th January, received by the Chairman of the Commonwealth Dried Fruits Control Board from the Chairman of the Board's Agency, in London, reads as follows:—

"Presume following information useful for growers, owing shortage all stocks of Apricots, Peaches, Nectarines, Pears. Forward position looks very strong. Shippers should obtain good prices. Good quality fruit wanted."

#### COMMONWEALTH SALES TO 31st JANUARY, 1926.

|                    | Tons. |
|--------------------|-------|
| Currants . . . . . | 1962  |
| Sultanas . . . . . | 4369  |
| Lexias . . . . .   | 1247  |

#### LONDON SALES.

In a cable to the Chairman of the Commonwealth Dried Fruits Control Board (Mr. W. C. F. Thomas) the London Agency stated that the following sales of dried fruits have been reported during the period from the 29th January to 4th February, 1926:

Sultanas.—Total, 27 tons; average price, £67/8/- per ton.

Currants.—Total, 46 tons; average price, £26 per ton.

Lexias.—Total, 15 tons; average price, £23/17/- per ton.

Inclusive of the foregoing, the total sales recorded with the London Agency of the Board since the opening of the 1925 season are as follows:—



GIBBS, BRIGHT & CO.—See Page xivb,

Sultanas. — 11,945 tons; average price, £68/5/- per ton.

Currants. — 4,749 tons; average price, £32/8/- per ton.

Lexias.—2,963 tons; average price, £32/15/6 per ton.

#### APPRECIATED IN U.S.A.

Keeping in Touch with American Developments.

Mr. W. W. Foote, Librarian, the State College of Washington, Pullman, Wash., U.S.A., writes 12/11/25,—“We thank you for sending the “Fruit World.” Please continue to send your paper. We are placing you on our mailing list to receive our Experiment Station publications.”

[Readers please note.—Bulletins detailing experiments in U.S.A., are available to our readers on application. Ed., “F.W.”]

The fruit marketing organisation of the State Fruit Advisory Board in Victoria is doing its best under difficult conditions. The detail work is voluminous. The report of the manager, Mr. B. Cook, will be awaited with interest; many helpful suggestions are expected as a guide for future operations.



# South Australia

Crop Reports      Seasonable Culture Hints  
Olive Oil Manufacture.

## Fruit Crop Report.

**I**N A REPORT issued by Mr. Geo. Quinn, the South Australian Government Horticultural Instructor, under date February 9th, the following appears:—

The harvesting of Strawberries, Gooseberries, Raspberries, Bush Currants, Cherries, Apricots, early and mid-season Peaches and Plums has been completed. Owing to the unusually long dry spell of weather extending from September until the present date without sufficient rain falling to penetrate to the roots of the plants, these fruits suffered in direct comparison with their order of ripening. All of the crops on the berry fruits were hurried off and shortened in quantity and quality.

The Cherry crop was fair to good and matured well.

Apricots, excepting in a few orchards in the Barossa district, were very short in quantity, but the quality generally was good and the dried article is well up to standard.

Early Peaches have been scarce and good prices were received for these and the early mid-season sorts, which were a little more plentiful; later kinds are promising fair quantities only. Clingstone varieties are scarce and canners are looking to other States for supplies of these.

Nectarines have cropped well in coastal districts but poorly in the Irrigation Areas.

Apples are plentiful in certain varieties only. Jonathans are laden heavily in all districts, Cleopatras from fair to good in others; Dunn's are mostly resting; other sorts are mostly in medium numbers, Rome Beauty showing more freely in some localities than others.

All of these fruits are small and excepting where very good tillage methods have been followed, need rain badly to develop them up to a fair export size.

The outstanding feature in relation to the crop of Apples is its remarkable freedom from Black Spot, Bitter Pit, or skin russetting, but Codlin moth caterpillars are taking toll even in the best sprayed orchards. A dry, comparatively cool, summer appears to favor the rapid hatching of this

pest. Pears are only fair in most varieties, though Williams is more consistent on the whole.

Plums vary greatly in different centres, some parts recording good yields, others very little. Prunes have promised well but the dry soil has caused much immature dropping to take place. On the whole the Plum yield will not be up to the average of some years past.

Figs promise a good yield, as do Olives and Quinces also. Amongst nuts, Almonds vary much, some sorts spelling whilst others carry heavy crops—the general result may be classed as below that of average seasons. Walnuts, grown but scantily here, are cropping well and the nuts are mostly free from bacteriosis (black spot), a feature usually noted when dry spring and early summer weather prevails.

Grapevines in coastal areas are standing up to the protracted dryness better than was expected, but the bunches are bound to weigh lighter than the earlier promise indicated. Wine Grapes are present in fair quantities, but the heavy bearing sorts, such as Doradillo and Mataro, have been the principal disappointments in this respect. Drying Grapes vary also. In the Murray Valley old Sultana plots are disappointing, but the younger bearing vines of this sort promise well both in quantity and quality.

The Currants are carrying a very fine crop of most excellent bunches of berries of good even size, and given fine weather for the next two or three weeks the harvest which has already begun should yield an excellent sample of dried fruit.

The Muscats (Lexias) are carrying a heavy crop also, but these along with many of the Currants will probably go straight to the distilleries this season owing to the disappointing result of the sales in London of last season's fruits.

## Citrus Prospects are Good.

The Citrus are practically all irrigated in this State, so the dry season has not seriously affected them. Lemons promise good crops. Oranges are now far enough advanced to indicate from fair to good yields, and Mandarins, though not grown largely, have set well.

The production of Tomatoes has become an important section of intense fruit culture in this State, and ranges of glasshouses are increasing in number and area each year. This season, owing probably to changeable atmospheric conditions the cropping has been somewhat erratic with the result that high prices have been maintained. Spotted Wilt and several other more or less obscure defects have played havoc with the plants grown in open ground, so that the glasshouse grown fruits have not had much early outdoor competition.

## SYDNEY:

Fruit Commission  
Merchants Agents

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No. 1 Store  
Fruit Markets, Sydney  
Also at Melbourne Markets

Tasmanian Shipping No. 161.  
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**PROMPT RETURNS**

## TASMANIA

We are the Leading Australian Firm of  
**FRESH FRUIT EXPORTERS,**  
**JAM MANUFACTURERS (IXL Brand), FRUIT CANNERS, HOP FACTORS** (owning the largest cool stores for this purpose in the Commonwealth).  
Supplies of Corrugated Strawboard, Genuine Sulphite Paper, Nails, and best Packing Materials available at all times.  
Sole Distributing Agents for the Southern Tasmanian Associated Manufacturers of Evaporated (dried) Apples.

Agents for—  
Federal Steam Navigation Co. Ltd.,  
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Osaka Shosen Kaisha, London Assurance Corporation.

Correspondence Invited.

**H. JONES & CO. LTD.,**  
HOBART

The glasshouses used here are of a very crude character, no attempts being made to regulate the temperature, sunlight, or ventilation, so that the plants feel all sudden changes of temperature severely. To eliminate much of the "chance" which enters into the industry the proper control of these factors will have to be taken into serious consideration with the gradually increasing competition amongst the growers.



Write to-day for Handbook—"Productive Fertilisers"—mailed Free, on request to—

The AUSTRALIAN SULPHATE OF AMMONIA PROPAGANDA COMMITTEE

360 Collins Street, Melbourne

Make a point of asking your  
fertiliser agent about

## Sulphate of Ammonia.

He will tell you that it is Australia's best and cheapest nitrogenous fertiliser, and can be used alone as a top dressing or to supply the nitrogen in mixed manures.

If you carry on intensive cultivation, you know that you cannot do without nitrogen in some form or another, but you will naturally buy the best and the cheapest. In other words, you'll buy

## Sulphate of Ammonia.

### ORCHARD NOTES FOR SOUTHERN DISTRICTS FOR MARCH.

(By C. H. Beaumont, Orchard Instructor and Inspector, S.A.).

THE main work for the month will be packing Apples and Pears for export. Great care must be taken to pack only the most suitable fruit.

In spraying for codlin moth, most of the growers use a stronger mixture than is recommended; those using spreaders can clearly see the benefit of so doing.

It is good to use Bordeaux mixture on trees, Cherry and Japanese Plums in particular, where fungous pests have been very bad.

Pruning Apricot and Peach trees may be commenced in later parts; the bearing-rod of vines may be removed with advantage to the vine.

Current drying may be completed. Growers are thinking more of dehydrators. A pamphlet and plan can be had upon application to the Department of Agriculture, adding the cost of postage.

Take out all sickly trees and leave holes open until planting time. Send in your order for trees if you intend to extend the orchard.—S. Australian "Journal of Agriculture."

### To Make Olive Oil.

Olives are now grown largely in S. Australia, and in the irrigation areas of N.S.W. and Victoria. Olives are also grown in Western Australia and Queensland.

In answer to a question as to the method of making Olive oil, the "California Cultivator" furnishes the following hints:—

Extraction of oil from fresh Olives gives the best oil. This is somewhat troublesome to do as they are generally partially dried. Place Olives in layers not more than three inches deep, on trays stacked in a dry, well-aired room protected from wind and direct rays of the sun. Turn daily until fruit becomes well wrinkled. This requires about eight or ten days. To hasten drying artificial dryers are sometimes used. The Olives are usually crushed by heavy stone rollers revolving in a circular depression in a bed of masonry into which the fruit is placed. It is very essential that the flesh be crushed thoroughly in order to break up the cells and permit the oil to be pressed out.

When the crusher has reduced the Olives to a mass, the pomace is shovelled up from the bed of the mill

and prepared for pressing. Coarse linen cloth is used. A certain amount of pulp is put in each cloth so that when the cloth is folded back it makes a cheese about three feet square and three inches thick. Ten or more of these cheeses are placed one above the other, with slats between and the pressure applied gently at first. From the liquid that runs out first is made the very finest oil, known as virgin oil. The pressure is then increased very gradually until the full power of the machine is reached. This second quantity of oil is generally mixed with the first. After obtaining all the oil possible the "cheese" is taken out, thoroughly broken up in hot water and pressed again. Any oil that is obtained after this is of very inferior quality.

The liquid from the press is dark coloured and is conducted into a receptacle for settling. Much of the foreign matter quickly separates, the oil appearing on the top. The oil is removed to other receptacles in which it can stand from two to five months for perfect separation of undesirable sediment. These settling tanks may be of well tinned metal or of cement lined with glass or other impervious substance. The first settling is made by means of a funnel shaped apparatus which, by its conical shape, facilitates the rapid disposition of sedi-



ment. After standing for 24 hours in this apparatus the major part of the sediment is deposited and can be drawn off at the bottom.

It is well, before running the oil into the settling tanks to pass it through two or three inches of cotton wool. This is accomplished by means of a funnel with a perforated, horizontal cross partition upon which the cotton is placed. It takes about one month for the oil to settle sufficiently in the first tank. Then it should be drawn off carefully into the second and so on until it is sufficiently bright. Three rackings are usually enough. Olives are sometimes ground and

## R. JOEL & SONS

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LONDON, W.C.2

**Open for  
Consignments of  
all Australian,  
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New Zealand  
Fruits**

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Cablegrams:

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TRALIA.

BANKERS:

National Provincial Bank Ltd.,  
Long Acre, London. Barclay's  
Bank, Henrietta Street, Covent  
Garden.

pressed in portable cider mills or  
ground in barley crushers for oil  
manufacture on a small scale.

### SPARROW AND STARLING DESTRUCTION.

Four thousand eggs and scalps of  
sparrows and starlings were counted  
and destroyed at a recent meeting of  
the Lone Pine branch of the Agricul-  
tural Bureau, South Australia. This  
came as a result of the prizes offered  
by that branch to boys under 16, for  
the collection of eggs and scalps.

## New Zealand.

### Certified Fruit Trees.

For some years the New Zealand  
Nurserymen's Association has im-  
pressed upon fruitgrowers the need  
of planting only certified fruit trees.  
The Secretary of the Nurserymen's  
Association, Mr. G. A. Green, in his  
report to the annual conference in  
January, said that unfortunately some  
of the orchardists did not appear to  
realise the value of certified trees,  
with the result that the supply was  
now in excess of the demand.

### FRUIT EXPORT.

Varieties of Apples Exported from  
New Zealand in 1925 Season.

The following particulars of the  
varieties of Apples exported from  
New Zealand to Britain, South  
America, Hawaii and British Colum-  
bia, in the 1925 season, have been  
compiled from Orchard Instructors'  
reports, the figures representing the  
number of 1-bushel cases shipped:—

Sturmer, 68,092; Jonathan, 59,011;  
Delicious, 21,954; Dunn's, 18,131;  
Dougherty, 14,802; Cox's Orange,  
7,932; Statesman, 7,776; Rome  
Beauty, 5,657; London Pippin, 4,874;  
Scarlet Nonpareil, 3,111; Cleopatra,  
2,588; Newtown Pippin, 2,417; Roke-  
wood, 2,050; Premier, 1,798; Worces-  
ter Pearmain, 1,660; King David,  
1,455; Lord Wolseley, 1,416; Adam's  
Pearmain, 1,290; Pioneer, 780;  
Tasma, 616; Spitzenberg, 587;  
Hoover, 581; Stark, 374; Washington,  
320; Frimley Beauty, 295; Shoreland  
Queen, 292; Ballarat, 292; Edward  
Lipplatt, 250; Yates, 230; Salome,  
222; Rona, 218; Stayman, 211; Scar-  
let Pearmain, 194; Willie Sharp, 155;  
Crofton, 150; Tasman's Pride, 150;  
Brownlee's Russet, 140; Ribston Pip-  
pin, 125; Brighton, 110; Granny  
Smith, 96; Beaumann's Reinette, 86;  
Ryder, 73; Shepherd's Perfection, 73;  
Boston Russet, 47; Senator, 32; All-  
ington Pippin, 20; McMahon's White,  
19; Commerce, 6; Kentucky Red-  
streak, 3; total, 232,761.



GIBBS, BRIGHT & CO.—See Page xivb.

## THE SIMPLE LIFE.

### Health Value of Fruit and Vegetables. Orange Juice Advocated.

Mr. Elbert H. Gary, the head of a  
large American firm, is an apostle of  
the doctrine of "eat less and feel bet-  
ter" (states the "Fruit, Flower and  
Vegetable Trades' Journal"). He  
has been following a course of dieting  
at a private hospital, and in general  
his daily diet has consisted of the  
following:—Fresh fruit, especially

H. M.

**WADE  
& CO.**

## Fruit Merchants

Prompt Advices of Sales  
—CHEQUES WEEKLY—

**471 FLINDERS LANE  
MELBOURNE**

And WESTERN MARKET.

**Edward Jacobs  
& Sons**

**Covent Garden Market  
LONDON, England**

**Solicits Consignments  
of Australian Fruit.**

Tasmanian Representative:

**W. D. PEACOCK & CO. LTD.**  
Princes Wharf, Hobart.

Shipping Number 418.

Orange juice; fresh vegetables, plain-  
ly cooked; Potatoes with jackets on,  
and Spinach boiled in its own juice,  
and the juice consumed as well as the  
greens; not much meat, but what is  
eaten must be of simple wholesome-  
ness with very little seasoning; and  
sweets—practically none.

Arcadia,  
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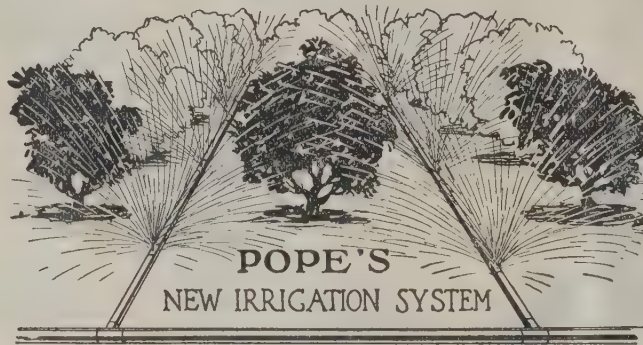
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**A mile a day can be laid——Low Priced**

Pope's new Irrigation System consists of light Galvanised Pipes with Spreaders attached. The pipes are jointed together or released by a patent quick action clamp. No tedious screwing or soldering.

**The best of a MILE CAN BE LAID in a DAY.**

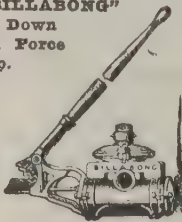
The Pipes can also be used as conduits for running water. The lowest priced irrigation system we know of for fodder, fruit and vegetable crops.

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For a Working Exhibit of "Billabong" Mills and Pumps

**"BILLABONG"**

Low Down  
Hand Force  
Pump.



A powerful Hand Pump, with many uses on farm or station, including that of fire pump. Has a total force and lift of 60 ft., and a capacity of 1680 imperial gallons per hour. **Price, 95/-.**

**"BILLABONG"**  
Centrifugal Pump.



This Pump delivers enormous quantities of water. Suction and discharge can be taken from an angle. Fast and loose pulleys are provided. In sizes from 1in. to 8in.

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All brass. Very strongly made. Graduated spray gives a fine mist or jet as required. Splendid for small orchards.

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## The Royal Agricultural Society of N.S.W.

# EASTER SHOW, 1926

MOORE PARK, SYDNEY

From 29th March to 7th April



SIR. SAMUEL HORDER  
President—  
Royal Agricultural Society of N.S.W.

A comprehensive display of all  
Primary Products, Live Stock, Machinery and Manufactures  
Valuable Prizes are to be given for the best display of properly packed  
and Graded Fruits. The Horticultural Section has Large Entries.

Splendid Displays of Citrus Fruits.

Large Entries have been received from all parts of the Commonwealth.

(By J. H. Coghill)

### Sydney Show.

THE EDUCATIONAL ADVANTAGES accruing from attending such a big function as the Royal Easter Show in Sydney are so great that it may be assumed every man and woman who can make it convenient, will be present. At the Sydney Show there are so many features of interest that it is a delightful experience to spend there a portion of every day on which Show is open.

All the latest labour saving machinery is on view—not alone for farm and orchard work, but also in the domestic realm, for every new device is welcome which lightens the duties of the womenfolk.

It speaks well for the genial climate and rich soil of the State that such a wide range of fruit can be produced. From the cold climate Strawberry to the tropical Banana.

The exhibits of fruit at the Sydney Show are of great interest to the visitors from the other States, being one of the many demonstrations of the State's fertility.

The Easter Show of the Royal Agricultural Society of New South Wales is certainly an event of the first importance to the man on the land. The whole of the products of the State—and even from further afield—are brought together in one grand display. The organisation which precedes such an event is colossal, yet all arrangements are carried through speedily and harmoniously.



### Royal Agricultural Society of N.S.W.

Left—Lt. Col. G. C. Somerville,  
C.M.G., D.S.O.  
Secretary.

Right—Mr. E. J. Rafferty,  
Assistant Secretary.



As the Sydney Show is held in the Autumn, there is invariably a wonderful collection of fruit of all kinds. This is of especial interest to our readers, for the varieties are to be seen in their several types with such variations as are noticeable from the several districts of the State. Not only so, but there is also fruit from the other States as well, and this is invaluable from the standpoint of comparison. It is in this fruit section that the Sydney Show has an undoubted advantage over the Melbourne Show, which is held in the Spring.

In addition to the benefit which accrues to the rural dweller from a visit to the Sydney Show, there is another aspect which is of immense benefit. The country on this occasion visits the town, and the city dweller has brought home to him in a pleasant yet overwhelmingly convincing manner the importance of the primary industries. This is an achievement not to be despised, as there is a tendency at times, in the midst of a city's activities, to overlook the solid worth of the country industries—the solid foundation for natural wealth, progress, and prosperity.



## A GLIMPSE OF HISTORY.

OF the many thousands who have attended the Royal Easter Show in the past, there are few who know anything of the Society's inauguration, and for the benefit of those who take a deep interest in Sydney's great Easter show we will mention a few matters of interest.

The first Agricultural Society of New South Wales was founded at Parramatta in the year 1822, when the first show was held there. And the Royal Agricultural Society is a continuation of same to-day. The "Royal" was incorporated by Act of Parliament, dated 13th November, 1869. The first show was held in Prince Alfred Park, Sydney, in that year, and it was not until 1882 that the Society held its initial show on the present site, Moore Park, which then comprised an area of forty acres.

In 1911, by virtue of an Act of Parliament, the show-ground was vested in the Royal Agricultural Society of New South Wales, the area being something like 54 acres. To meet the ever-growing requirements of exhibitors and the general public, a further area of 15 acres was leased from the Commonwealth Government for a period of 20 years from the 1st July, 1920. The objects of the Society

are to promote the development of the agricultural, pastoral, viticultural, horticultural, mineral and industrial resources of the State, and its ramifications have spread far and wide.

The "Royal" always holds its annual exhibition at Easter time, which attracts exhibits from all parts of Australasia. All classes of live stock and agricultural produce are on exhibition, besides beautiful fruit exhibits are made a special feature. This year the fruit exhibits are on a very large scale, as there are many valuable prizes to be won. Then there are exhibits of machinery, wines, manufactures, etc.

The Society's progress during the past decade has been phenomenal, and it must be readily admitted that the Society's onward march is due in a great measure to the tactful manner in which the business end is governed by the secretary, Lieut.-Colonel G. C. Somerville, C.M.G., D.S.O., who is ably supported by the assistant secretary, Mr. E. J. Rafferty. Then there is the ground staff employees, who are all proved and capable hands. So it can be said the Society's machinery is in perpetual motion.

The progress of the Society is borne out by the following figures, which are worthy of note:—In 1921: Attendance, 473,400; gate receipts, £31,790; total revenue,

## Metal Spraying Schoop Process

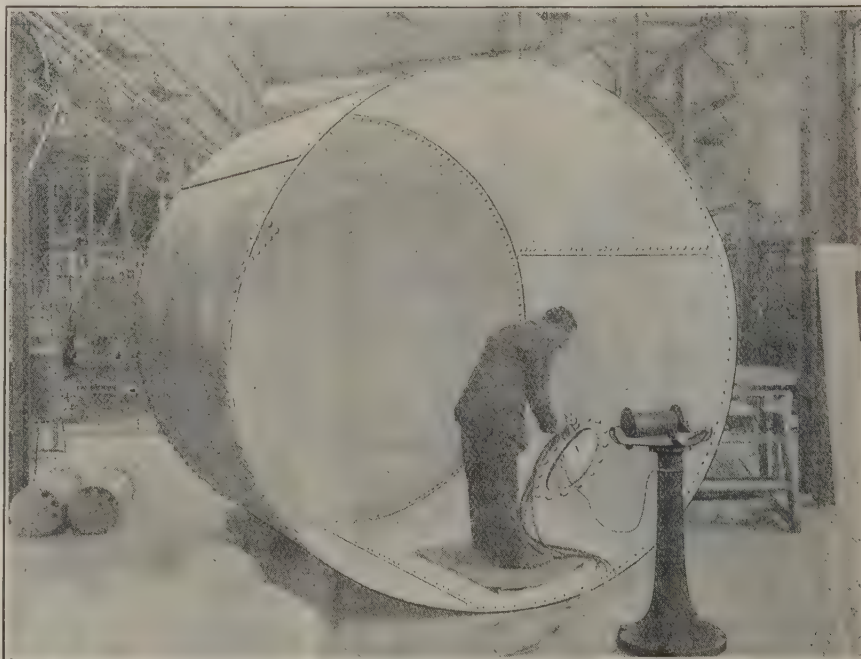
### Eliminates Corrosion.

The Schoop Metal Spray Process is a means whereby any of the commercial metals may be deposited as a coating of any desired thickness, on to any surface, whether metallic, wooden or plaster.

It affords means of protecting iron, copper and other vessels from the effects of all forms of corrosion, whether due to atmospheric, water or chemical agencies. Windmill structures, water tanks and all iron vessels and structures exposed to weather, or buried in the ground should be **ZINC SPRAYED**.—They will never rust. Cookers, Exhausters, and iron articles used in the canning industry will rapidly decay unless coated with **ZINC**.

Copper and iron vessels used in fruit and vegetable juice extraction require to be tin or aluminium coated, thus preventing contamination of product and corrosion of the container.

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Large Fruit Syrup Tank Tin Sprayed.

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£48,969; total expenditure, £28,772. In 1922: Attendance, 508,100; gate receipts, £35,491; total revenue, £59,433; total expenditure, £34,286. In 1923: Attendance, 537,200; gate receipts, £37,138; total revenue, £63,919; total expenditure, £36,472. In 1924: Attendance, 610,500; gate receipts, £43,515; total revenue, £74,841; total expenditure, £37,142. In 1925: Attendance, 625,200; gate receipts, £44,229; total revenue, £76,499; total expenditure, £36,076. So it is shown the total revenue from all sources has steadily increased as disclosed by the above figures.

The prize money in 1915 was £5026, and this year no less a sum than £13,000 is to be distributed in connection with the various exhibits. This is truly of a phenomenal character.

to avail himself of the privileges, and each member has a voice in the election of the office-bearers.

The Society is governed by a council of 53 members, inclusive of the President (Sir Samuel Hordern), fifteen vice-presidents, and honorary treasurer. These gentlemen give their services gratuitously. The Society is self-supporting, and does not receive any subsidy or monetary assistance from the Government.

The buildings and permanent improvements in the grounds are estimated at half a million pounds sterling, and trade exhibitors in numerous cases have erected permanent structures, which have run into several thousands of pounds.

The educational side is also cared for by the Society,



A Typical District Exhibit at the Sydney Royal Show.

One of the main features of the Royal Show is the wonderful display of Agricultural and Horticultural produce from different districts of New South Wales, and Queensland annually sends along a competitor. These exhibits are staged in courts specially set apart for the purpose, and visitors from all parts of the world are unanimous in declaring this section of the show to be the finest exhibition of its kind to be found anywhere.

The Society does not only confine its activities to the annual show alone, but has instituted competitions throughout the State with a view to furnishing the "man on the land" with the latest scientific and most up-to-date methods of production.

The franchise of the Society is based on democratic lines. The membership fee being fixed at a very low figure, which enables the ordinary artisan or working man

which provides for the training of two students at Sydney University, one taking a course in Agriculture and the other in Veterinary Science. A scholarship entitling a student to a four years' course at the Hawkesbury Agricultural College is also provided for by the Society, and has been in existence for many years.

#### THIS YEAR'S SHOW.

JUDGING by the very large number of exhibits to hand in connection with this year's "Royal" Show, it is anticipated there will be keen competition in connection with the various exhibits.

The Fruit section being well catered for, and the prizes for the best display of Apples, etc., provides a big prize list. In the district collection of Apples, there is a special



prize of £200, of which £25 is presented by Messrs. John Vicars & Co., tweed manufacturers, Marrickville, Sydney. The collection is to be staged in pyramid trophy form. A district to comprise an area embraced within 25 miles of any centre. All varieties (not more than 20) to be named. £100 to be divided between first, second and third prize winners, £45 and bronze medal, £30, and £25 respectively. The remaining £100, provided there are five exhibitors in addition to the first, second and third, to be divided, viz.:—Fourth prize, £24; fifth, £22; sixth, £20; seventh, £18; eighth, £16. Should there be fewer than eight exhibitors in this class, the prize money will be paid on the above scale, and the remaining surplus divided in proportion to the number of points awarded by the judges. No exhibit which gains fewer than 60 points will be eligible to participate in the prize money. In addition to prize money, £20 for organising purposes will be paid to each competing district.

There are also prizes to be given in connection with the following classes:—Apples, all grades, open classes; district collection of Pears, £60. Export classes: Apples, all grades; Apples for export (in case), £3/3/-, presented by Messrs. Geo. Monro Ltd., Covent Garden Market, London, Manchester, and Hull; Sydney agent, Major H. Dakin, Goldsbrough House, Macquarie-place, Sydney; Lemons for export (in case), dried fruits, and Grapes.

\* \* \*  
**THE POULTRY SECTION.**

The Poultry section has been carefully revised. A departure has been made this year in the judging day of the Poultry. In former years Wednesday, the official opening day of the show, was set apart as judging day. This has now been put forward one day, and in future these will be judged on Tuesday, the second day of the show.

# The Firm of Geo. Monro Limited

## FRUIT SALESMEN

Covent Garden, London, W.C. 2, Eng.

Established 1862.

Manchester, Hull, &c.

**The World's Largest Fruit Firm. Annual Turnover is over £4,000,000**

The late Mr. George Monro established himself in the fruit trade in 1862. The firm of Geo. Monro Ltd. now employs a staff of over one thousand, and they own a fleet of 45 Leyland motor lorries, which are constantly in use for the transport of their enormous fruit trade.

The business of this firm has now become so enormous that it is no exaggeration to state that it is the largest of its kind in the world. It embraces no less than ten distinct buildings in and in close proximity to Covent Garden Market; the floor space of these buildings is many acres in extent, and provides the very finest show rooms in the fruit trade of London. The firm is thus enabled to display all fruit consigned to it in that attractive manner which fruit should be displayed. The salesmen are the most expert men in the trade. The sale rooms are open for twelve hours daily, and are visited regularly by the highest class buyers from London and the provinces. These are some of the reasons why the account sales of Geo. Monro Ltd. compare more than favorably with those of other agents. Another matter of vital importance to growers is that the firm's account sales show exactly what each consignment is sold for. Prices are not averaged. A correct statement of the

transaction is given, and only actual out-of-pocket expenses are charged.

Another important item in the firm's policy is that it sells on commission only, and does not buy under any circumstances. This is a most important matter for growers to consider.

The firm's branch establishments are at Manchester, Liverpool, Hull, and Hamburg. The Manchester branch has recently been extended by the erection of a splendid building possessing every modern device for the better handling, packing and storage of fruit. Large quantities of Australian Apples are disposed of at this important centre.

As a result of the enormous growth of the firm's Apple business, it became imperative last season to increase the warehouse accommodation, and Hyde House, Langley-street, was taken over in April, 1925. The building is a very spacious one, consisting of four stories and a basement with a total floor space of 16,500 ft. The basement is a very deep one, exceedingly cool, and with a storage capacity of some 15,000 cases of Apples.

The directors of the firm are Major E. G. Monro (chairman), Mr. Geo. Monro, Mr. B. J. Monro, Mr. A. J. Monro, Capt. J. S. Monro, and Mr. A. Cole. All departments are under the personal supervision of the directors.

The position of Geo. Monro Ltd. in the fruit world is unique. The Governments of every fruit exporting country have from time to time sought their advice and acted upon it, and they continue to do so today.

During the seasons 1924-5 the firm handled 475,000 packages of Australian and New Zealand Apples and Pears. Arrangements are now complete for the handling of even larger quantities during the coming season.

An important part of the firm's policy is to keep very closely in touch with all the fruit producing countries of the world. In accordance with this policy, the chairman of directors, Major E. G. Monro, visited Australia, several years ago, and went to a great deal of trouble in advising growers of the requirements of the British buyer. Following this up, the firm's chief Australian agent, Major H. Dakin, visited England. These interchanges of visits have had a tremendous effect on the business, and are of incalculable benefit both to the grower and the firm.

The great number of young orchards which are now reaching maturity will compel growers to look to the export trade for the disposal of their produce, and of the overseas markets, Great Britain stands easily first.

Chief Agent in Australia—Major H. Dakin, Goldsbrough House, Macquarie-place, Sydney, N.S.W.

Attractive features of the Poultry section at the last shows were the non-competitive exhibits, showing modern poultry farms. This year a competitive class, carrying fifteen guineas in prize money, besides a valuable silver cup, has been created. The competing exhibits should show the working of the farm, methods of feeding, samples of feed, stud stock and their offspring, eggs produced in the yard, and other educational features.

Present indications point to a record for the 1926 Royal Show, judging by the many large entries received in all sections, which will eclipse its predecessors. It only requires fine weather throughout the show days to make it a record gate.

never experienced such dry conditions for over 25 years. The district had only 2 inches of rain throughout the past twelve months, and that was recorded as far back as last June.

Although such dry weather prevailed, the various exhibits displayed were, taking it on the whole, very good.

There was the opening of the new Taylor pavilion, which was officially performed by Mr. Bavin, M.L.A., Leader of the Opposition. The structure is of brick, and has a very large space for housing such exhibits as fruit, vegetables, flowers, honey, and other farm produce.

Considering the dryness of the district for such a long



A section of the crowd watching Arena Events at the Sydney Agricultural Show, Easter.

#### CENTRAL CUMBERLAND AGRICULTURAL AND HORTICULTURAL ASSOCIATION, N.S.W.

The above society held its annual exhibition of Agriculture and Horticulture at the Castle Hill Showground, which is some twenty miles from Sydney, and reached by train from the Central Railway Station, Sydney. From the Castle Hill railway station a motor bus conveys visitors to the showground, which is a mile distant.

Castle Hill show is known all over New South Wales, and is one of the oldest shows in the State. Two days were devoted to the show on the 19th and 20th February. There is talk of making the event a three days' exhibition, and, given good seasons, it should prove a success.

The society suffered considerably this show both in attendance and exhibits owing to the severe drought the district has gone through. Orchardists stated to our Sydney manager, who attended on both days, that they

period, the display of fruit from the Kellyville district was a splendid achievement. This display represented such fruits as Jonathan, McIntosh Red, and Granny Smith Apples and Williams Pears, besides other Pears in Napoleon, Packham's Triumph, and Packham's Late.

Besides Apples and Pears, there was a very fine collection of Japanese Plums, Rock Melons, Water Melons, Oranges, Lemons, and other varieties of fruits.

Mr. Firth, secretary of the Kellyville Agricultural Bureau, mentioned he obtained 475 half-bushel cases of Apples from six-year-old trees, which averaged five and six shillings a bushel. The soil in the Kellyville district is a sandy loam with ironstone formation. All the Kellyville fruit exhibited was grown under dry conditions, no fertilisers being used. There was also a very large and fine collection of bottled fruits. An exhibit of Italian Clingstone Peaches in jars attracted attention. Unfortunately, this fruit cannot be grown in the district owing



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Undoubtedly the Best Fertilizer

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**SHIRLEYS**  
**No. 5**

SPECIAL  
MANURES  
for all  
CROPS

Which has proved itself throughout the past 20 years superior to all others for these crops

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(Successor to Geo. Shirley Ltd.)

**19-23 Bligh Street - - Sydney**



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From Australian Material.

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Our Manufactures are known as the Very Best throughout Australia, and are obtainable from all the leading Merchants, Storekeepers, and Agents.

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Head Office: 39 Pitt St., Sydney

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to the fruit fly puncturing the fruit. Mr. Firth's family has a knowledge of this pest for over 35 years, and deteriorates as years go on.

The single Farm exhibit was won by Mr. R. Shinfield, with Mr. E. W. Mould's exhibit filling second place.

The Seven Hills district takes in such fruit growing centres as Castle Hill, Baulkham Hills, Dural, Kenthurst, Glenorie, Galston, and Kellyville. A good deal of the fruit grown in these centres is exported, and for local consumption, which is chiefly Citrus.

The Horticultural section was not up to the usual standard owing chiefly to drought conditions. In the Flower section, Mr. E. Ward, of the Sydney Botanic Gardens, was judge.

The following are the prize winners in the various sections of fruit:—

Messrs. H. Williams, E. W. Moulds, W. J. Fagan, S. E. Allen, G. H. Moulds, H. Williams, W. J. Black, E. E. Gilbert, J. C. Fryer, R. Shinfield, H. Featherstone, R. Fear, H. Reid, M. McInerney, Monda Orchard, A. Whale, A. J. Longley, G. A. Muir, P. James, J. Hemers.

The number of visitors to the show on the second day was fully 5000. During the progress of the show on the second day a good deal of controversy was indulged in with regard to standard packing.

The show was a success financially, and too much praise cannot be said of the secretary's duties performed by Mr. A. H. Best, or Dural, and his energetic staff of officials.

#### PACKING OF FRUIT AT THE CASTLE HILL SHOW.

##### Canadian Case Approved.

It was rather disappointing to see only two entries at the Castle Hill Show for the best "standard packed case of Cooking Apples." Although the schedule clearly stated "standard pack," one of the entries was exhibited in the old square pack. This contained the best Apples, and the owner stated after the judging that the reason he did not pack according to schedule was that it was impossible to pack this size of Apple (approximately 2½ inches) "standard pack." The judge gave him second prize, and expressed the opinion that the Apples could have been packed to "standard" (i.e., diagonal). This statement immediately brought forward a discussion as to whether the standard pack was adaptable to our local bushel case. It was contended by some of the growers present that it was impossible to re-pack these Apples on the standard system. The judge said that there was a grower present (Mr. W. F. Cates, of Pennant Hills West) who could re-produce this case as it should have been shown.

The re-packing was set down for the second day, when Mr. Cates brought along a Canadian bushel case, with loose lid, in which he re-packed the Apples to "standard," the case taking ten additional Apples to fill. This was inspected by the judge, who agreed that it was correct to the requirements. Some of the growers, however, took exception that the case was not a hinged lid, as used in the local trade, and wanted one of these used. The cases available, however, did not measure up to the proper standard measurements, 20 x 11½ x 10. There appears to be great variation in the ordinary bushel case as we know it, and it was rather a pity that one could not be secured on the ground to have conclusively proved the possibility of always packing to standard, irrespective of size.

# "IBIS" CANNED FRUITS

Peaches, Apricots  
and other Fruits

Grown and Canned on the  
**MURRUMBIDGEE  
IRRIGATION AREA**

The delicious natural flavor of  
the fruit is retained because it  
is canned on the spot straight  
from the trees.

Well and favorably known  
on the world's markets:

**"IBIS" Brand  
Canned Fruits**

For further particulars apply to—

**The Water Conservation  
and  
Irrigation Commission**

Union House,

247 George Street, Sydney  
N.S.W., Australia.



Speaking to Mr. Cates, he expressed the opinion that the Canadian case in which he successfully packed the Apples was more suitable than the cases with hinged lids, as the latter will not allow so readily for the necessary bulge.

carry well. The prominent packers from the big Apple and Pear growing districts, as well as the Co-operative Packing Sheds, are very favorably disposed towards these cases, the latter for Citrus fruits as well.

The sooner all growers recognise the necessity of only



Model Irrigation Farm

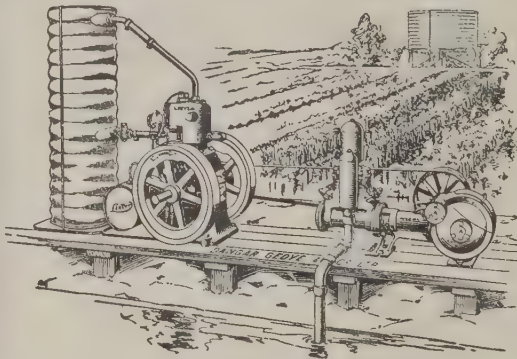
... at the ...

Sydney Royal Show.



The Canadian case is now being used more extensively for export, both for Apples and other fruits, and they

having one pack, and that the "standard," which is universal, the better it will be for all concerned.



## Pumping 24 hours by itself if you need it!

**Lister**  
BRITISH BUILT

Engine and Myers  
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Only the unique "self-oiling" construction and the proved reliability of both engine and pump make this plant possible. For irrigation work on a small scale or general pumping it's "on its own"

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SAWBENCHES



## In the Heart of the Show and throughout Australia—



A full Branch of the Commonwealth Bank of Australia has been established in the heart of the Sydney Agricultural Show, at the foot of the New Members' Grandstand for the convenience of exhibitors and visitors.

The Branch offers every Banking service—cheque accounts or Savings Accounts may be opened and operated upon.

As the Bank has branches in the principal towns and Savings Bank agencies in all Post Offices, intending visitors to the Sydney Show may transfer their funds direct from their home town.

Take advantage of this unique banking service and tell the children to ask for Money Boxes.

# Commonwealth Bank of Australia.

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The Slogan of the Primary Producer  
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**INCREASED PRODUCTION**

This does not mean increased acreage  
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One of the greatest aids to increased production

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### ARTIFICIAL FERTILISER MANUFACTURE.

The establishment of artificial fertiliser works at Cockle Creek, near Newcastle, New South Wales, by the Sulphide Corporation Limited is of interest to producers generally. The company has in its employ talented experts; experimental plots are maintained where the different manures are tested, and the results carefully noted.

The company claim that their immense works at Cockle Creek, near Newcastle, are the most up-to-date superphosphate manufacturing plant in the Commonwealth.

#### Fertilisers for Fruit Trees.

Scientific investigation and practical experience show that a greatly increased percentage of first-class fruit can be obtained by the application of a complete fertiliser, made up of potash, nitrogen, and phosphoric acid. Fruit trees require a preparatory period of growth, during which time artificial fertilisers are not so much needed as when the trees are bearing fruit. It is at this time when it is necessary that there should be a constant transfer of the nutritive juices from the tree to the fruit from the time the fruit forms until it ripens. It is in this respect that fertilisers are of the greatest value.

The application of the fertiliser to the trees is a point which should be carefully observed. It should be distributed throughout the lower layers of the surface soil where the feeding roots are located. This does not mean going on to the subsoil, but within a few inches or so of it. This is in ordinary dry seasons; during wet seasons, however, the fertilisers may be applied much nearer the surface, since they rapidly descend under these conditions, and become readily available.

#### Manuring Citrus Trees.

Citrus cultivation in New South Wales forms the most important part of orcharding, and it is estimated that over a million bushels are gathered from the orchards every season. Citrus trees respond readily to the use of the proper artificial manure. They grow over a very large area of this State, and fresh areas are being planted out each season. The chief centres at the present time are in the Country of Cumberland, and these would be very considerably added to were it possible to practice irrigation. It is only within recent years that orchardists have discovered how necessary proper fertilisation is under any conditions of cultivation. The use of artificial manures for citrus growing has a very marked effect upon the

character of the fruit, particularly in respect to color and quality, besides which the crop is greatly increased, and the size of the fruit materially added to.

In order to obtain the best results by manuring it is not necessary to apply more than about \$6 worth of S.C. orchard manure per acre, or at the rate of about 9 lbs. of manure per tree. For younger trees it is not necessary to apply so much. But, as the trees get older, and draw more upon the fertility of the soil, it will be necessary to apply a greater quantity.

"Balanced rations" are necessary. For deciduous fruits either apply by broadcasting prior to ploughing during the late winter, or apply along every second furrow as it is being opened up during this ploughing. As with citrus there is nothing gained by ploughing fertilisers too close in to the stem of the tree, just inside the outspread of branches will be close enough, and thus induce roots to forage well out. After bearing stage apply 1 lb. fertiliser to each year of tree's life, up to half-ton per acre.

**Citrus Fruits.**—These are benefited by two applications of fertilisers, especially where no green manure crop has been applied—i.e., during late winter—July-August; and summer—February. For the summer application it would be better to broadcast fertilisers on surface and lightly plough same in. With the late winter application it would be desirable to well harrow or cultivate the area where fertiliser is applied along the furrows.

### METAL SPRAYING.

#### To Eliminate Corrosion.

An ingenious process is now in operation by which any of the commercial metals may be deposited as a coating on metal, wood, or plaster. This is termed the Schoop process, operated by the Aluminio-Thermic and Metal Sprayers Ltd., Union House, George-street, Sydney. This process protects iron, copper and other vessels from corrosion, whether due to the atmospheric, water or chemical agencies.

The procedure is simple, and the uses to which this process can be placed are many. Windmills, water tanks and iron vessels exposed to weather or buried in the ground can be zinc sprayed in the method above described; this prevents rusting. Illustrated booklets are obtainable free of charge from the firm mentioned.

Further particulars are found in the advertisement on page 142.

### AN INGENIOUS WINDMILL.

A windmill which needs oiling only once every six months, and which is automatically safe in a gale, is an evolution in mechanics caused by Australian conditions "out back." On some of the big stations the windmills are ten to twenty miles apart, and the time taken up by boundary riders or station hands in attending to them is considerable, and the Australian-made "Billabong" windmill was devised to meet those conditions. The whole of the mechanism, consisting of double gears and plungers, are enclosed in a weatherproof gear case.

This gear box is partially filled with oil every six months, and it lubricates the mill for a further six months without attention. The mill is also automatically governed and suits the speed of the mill to the wind. When it becomes too boisterous for safe pumping, the governor throws the wheel out of the wind, pumping ceases, and the wheel does not come back to the wind till it is safe to do so.

Another ingenious attachment is a self-acting tank regulator for use at watering points. This device keeps the drinking troughs automatically filled. When the water falls the ball cock opens and fills the trough to within a few inches of the top, when the floating ball shuts off the water. The typically named "Billabong" is manufactured in Australia by Danks', of Sydney and Melbourne.

### AUSTRALIAN FERTILISERS PROPRIETARY LIMITED.

After thirty-two years of direct dealing with the primary producers of Australia, the Australian Fertilisers Pty. Ltd., which was for many years known as Shirley's, is still as much in evidence as ever, and they have the satisfaction in all these years of earning a reputation which is much valued by the Australian primary producers who use their fertilisers.

With regard to fruit tree fertilising, all fruits require potash, and from the time trees begin to bear, this plant food should always form part of the manuring campaign. Many growers pin their faith to bone manures alone, omitting potash. This is wrong, and in most cases their trees tell them so.

If fruit growers would study the nature and needs of their trees, there would be less poor quality fruit, and better tasting and packing fruit. Fruits require phosphoric acid also, and at some stages of growth in quickly available form, as in super; but how few study the subject and benefit by the knowledge so easily available to them.





### IMPORTANT.

The phenomenal results achieved by the use of "KARSWOOD" throughout Australia, have been accomplished under ordinary and perfectly natural conditions. In not one instance are they the result of specialised treatment or provision. They are therefore, the most practical of all tests and the greatest assurance any poultry owner can have.

Further, Karswood has the support of the World's highest authorities, and has the largest sale of any poultry food in the world. It is used and believed in by an ever-increasing number of "backyarders" and professional poultry keepers including probably the largest poultry breeder in Australia.

## Laying while moulting

**W**HAT greater test is there than this? On the health of your fowls now depends the ease in which they will pass through this period, and in turn, upon the quick delivery from the fatigue and distress of moulting depends your supply of winter eggs—your great profit-making opportunity. Karswood Poultry Spice (which contains dried and ground insects), while it has been directly responsible for keeping up egg production practically to its maximum, throughout the months of November, December, January and for this month, for many

poultry keepers, is just as capable of bringing poultry through a quick and easy moult. In fact, so efficacious is it, that in a number of cases, it has enabled fowls, that have been going "on top" right up to the moult, to even lay a few eggs while moulting. No food other than a definitely natural tonic could do this. Give Karswood a trial (the cost is only a halfpenny a day for 12 birds) and help your fowls over the moult in the same way as hundreds of other poultry keepers have done.

### Simple Treatment and Success.

"I began to feed Karswood to my chicks at six weeks old as an experiment, having heard it always very highly recommended in England. My chicks have given me no trouble in rearing, and commenced laying from 4½ to 5 months of age, a good sized egg with no "pigeon eggs" among them. They are laying well on a simple mash of two-parts pollard and one-part bran, with wheat for evening grain—and now, whilst my hens are moulting, I give an extra mid-day mash to keep them in heart. I have refrained from any outlay in ready mixed mashes or meal-meal, etc., my only extravagance has been Karswood Poultry Spice, and they get it regularly every morning according to directions, and I am sure it more than pays for its cost. From 65 hens with which I commenced, I have been getting from 40 to 50 eggs daily, and have reared 200 pullets.

(Signed) (Mrs.) ELSPETH JACKSON.  
Kenthurst, N.S.W.

### NOTE THE ECONOMY.

1/- packet supplies 20 hens for 16 days.  
2/- packet supplies 20 hens for 32 days.  
13/- (7lb. tin) supplies 140 hens for 32 days.

### SUPPLIES.

"Karswood" Poultry Spice is obtainable from all Stores and Poultry Food Suppliers at the following standardised prices:—

|                    |      |                    |      |
|--------------------|------|--------------------|------|
| ½ lb. packet .. .. | 1/-  | 1 lb. packet .. .. | 2/-  |
| 7 lb. tin .. ..    | 13/- | 14 lb. tin .. ..   | 25/- |
| 28 lb. tin .. ..   | 48/- |                    |      |

If your local dealer cannot supply you, write direct to Messrs. Henry Berry & Co. Pty. Ltd. 380 Collins St., Melbourne, adding postage (6d. on half-pound packets and 9d. on one-pound packets)—to above prices.





## TO KEEP POULTRY HOUSES CLEAN.

**T**HE best spray for keeping or getting poultry houses clear of vermin is kerosene emulsion used as frequently as may be necessary, states the N.S.W. Department of Agriculture.

To make the emulsion, take 8 oz. of soft soap and dissolve it in 1 gallon of boiling water; take the mixture off the fire and add slowly 1 gallon of kerosene, stirring all the time. This mixture should be agitated briskly until the oil and the soapy water are thoroughly emulsified. These 2 gallons are then designated the "stock." Add to this 10 gallons of soft water. Hard water will not do, nor should lime or any caustic substance come in contact with it, or the result will be that the oil will separate from the soapy water, and the emulsion will be spoiled.

If it be desired to make the spray also a disinfectant, add 1 tablespoonful of miscible carbolic acid to each gallon of emulsion. The whole should be kept well stirred, especially when adding water.

A small force pump suitable for this work, which can be stood in a kerosene tin and held down by means of a footrest that is provided, is obtainable, complete, with a short length of hose and nozzle at about 32/6 in Sydney.

Should the vermin be confined to the roosts, these might be washed over with a brush in place of spraying.

The method described above is the only way in which it is possible to make the emulsion, and unless it is followed exactly, the product will be useless. If the oil and water are not thoroughly emulsified (mixed) the oil will float on top of the soapy water and the mixture will be absolutely ineffective.

## TURKEY RAISING.

### Management of the Birds.

**T**URKEY raising in this country is almost exclusively confined to the rearing of comparatively small numbers on farms and stations. No success is known in "farming tur-

keys" in the same sense as poultry-farming is carried on. If for no other reason, the disease entero-hepatitis (blackhead) would make turkey farming too hazardous.

Turkey eggs should be hatched by turkey hens where practicable, but they may be hatched by other hens. Very little success is likely to be obtained with hatching turkey eggs in incubators; probably not more than 25 to 30 per cent. will be found to hatch, although if set under hens for the first half of the period better results are obtained from the incubators.

Turkey hens will be found to set best when they make their own nests; sometimes, however, it is necessary to put shelter over them with a few bushes in front, to make the nest look as natural as possible. Feed and water should, of course, be placed near the nest, so that the hen can help herself. Grain, either maize or wheat, or both may be used.

At hatching time, if the turkey chickens are not hatching all together, they will be better taken away from the hen as they become dry, so that the hen will sit quietly and hatch the balance. When the chickens are taken away they should be put into a basket or box lined with flannel, or some woollen material, and kept warm until the hatch is complete, when they should be given back to the hen; this practice prevents a lot of casualties during hatching time.

The turkey hen with a brood should be confined to a small enclosure for three weeks to prevent her roaming too far and wearying the chickens.

There is no material difference between feeding turkey chickens and other chickens. They should not be given any food for the first thirty-six hours. For the first two days there is probably no better or safer feed to give them than rolled oats or very coarse oatmeal. Some use hard-boiled eggs rubbed up with breadcrumbs, but this entails great care on the part of the attendant to see that it is all eaten up and none left about after each feed, or bowel troubles will result.

After this, the principal feed may consist of pollard and bran mash mixed to a crumbly consistency. To

mix this mash properly, proceed by pouring heated milk over the bran, using about one-third bran to two-thirds pollard, and varying the pollard to more or less according to whether it is fine or coarse; add about 4 oz. of common salt to the bushel of dry matter. This should be dissolved in the milk or water with which the feed is mixed.

This feeding should be supplemented by finely-crushed grain, such as wheat or maize, for the evening feed, or a very little may be given during the day, but very young chickens should not be fed on whole grain.

Finely chaffed lucerne, barley, rape, or other succulent green feed should be given where possible. The chickens should be fed in this way more or less for the first five or six weeks, when the number of feeds may be gradually reduced and adult feeding introduced. Their feed from then on should consist principally of grain. Finely-chopped onions, leeks, &c., are a valuable addition to the ration during mid-growth.

## Bee-Keeping.

**B**EEKEEPING can be combined advantageously with fruit growing, farming, and poultry raising. Many of the unpleasant

## Latham Dehydrators

"STAND ALONE"

The "Rolls Royce" of the Artificial Drying World.

### Some Installations for Foodstuffs.

| Purchaser                                                     | Principal Prods                      |
|---------------------------------------------------------------|--------------------------------------|
| Merbein Dehydration Trust, Mildura                            | Sultanas<br>Raisins etc.             |
| Tasmanian Dehydration Pty. Ltd.<br>Bridgewater<br>two plants. | Apricots<br>Prunes<br>Apples         |
| Charles Martin,<br>Yackandandah                               | Prunes                               |
| Swallow & Ariell Ltd.<br>Port Melbourne.                      | Carrots<br>Turnips<br>Cabbages, etc. |
| Woorinen Co-op. Pack.<br>Shed, Woorinen                       | Sultanas<br>Raisins etc.             |
| Aurora Pack Co. Pty.<br>Ltd., Irymple.                        | Sultanas<br>Raisins etc.             |

## D. J. LATHAM

157 Queen Street,

Melbourne, Australia.



features associated with the keeping of bees have been eliminated by modern methods of handling, and also by perfecting the bees themselves.

The modern hive in its simplest form consists of a floor or bottom board, a hive body to hold the brood frames, supers to hold extracting frames, or section holders for comb honey, and a cover to shield the hive from the weather.

The old style box hive when filled frequently caused swarming, because the bees did not have enough room in which to store honey. Modern methods of management seek to discourage swarming, and to encourage the bees by expansion of the hive to keep on storing honey. A strong colony of bees will, as a rule, gather more honey if it can be prevented from swarming.

Amateur beekeepers are inclined to think that a petrol case is good enough for a hive, and they are disappointed at the results. The fact is too often overlooked that the timber in the sides of a petrol or similar case is only  $\frac{3}{8}$  in. or  $\frac{1}{2}$  in. thick, and does not give the bees sufficient protection from severe hot and cold weather.

If the beekeeper is going in for honey production, it is not advisable to increase to a great extent. Five strong hives will gather just as much

as 15 weak colonies. The idea is sometimes held that it is advisable to split a full stock into three or more parts; that is incorrect, unless increase is desired.

It is quite possible that a frame or so of bees will develop into a strong colony, but it will take a considerable time, and will be useless that season, unless the honey flow in the locality is very late. Where artificial swarming is desired, it is an advantage to have nuclei with

#### Young Fertile Queens

to introduce into the new hive. Most hybrid bees are inclined to swarming, and at times are a great nuisance, because they will swarm with the old queen, and if very strong, will swarm two or three times.

As a rule, the first swarm is the best, and the others are very small and useless, but in some cases they come in very handy for strengthening a small, queenless hive, providing the hive has been queenless for four or five days.

If the hive has been queenless longer and queen cells are sealed, the bees in the old hive will more than likely kill the queen with the swarm, and, consequently, the bees with the swarm will return to their old hive again, and perhaps kill the queen there. A full stock that has swarmed

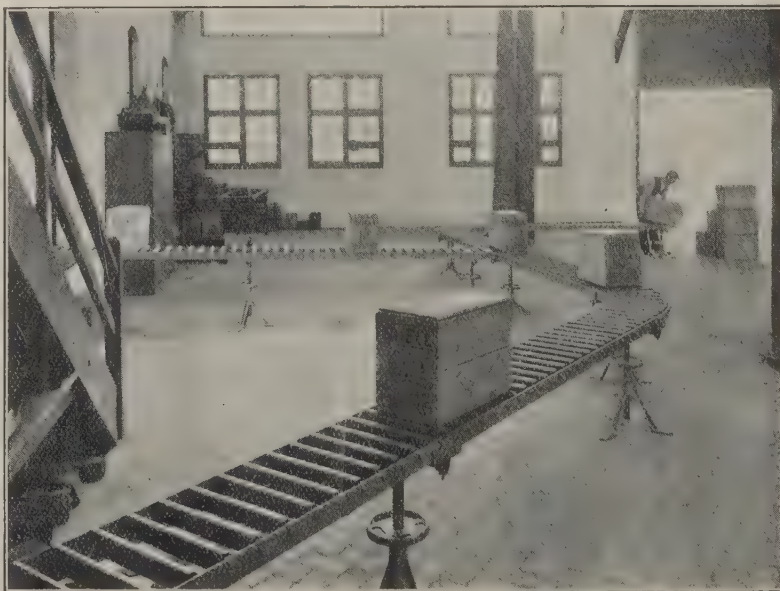
three or four times becomes greatly reduced in strength, and will take considerable time to build up into a strong hive.

It is, therefore, advisable to examine the old hive from which the swarm emerged, and destroy all queen cells and introduce a fertile queen, but, in some cases, when the bees intend to swarm, no matter what may be done, they will have their own way. It is, therefore, beneficial to introduce artificial swarming.

There are many ways of making artificial swarms, but all are not a success, and there are many who condemn artificial swarming, but if done in a proper way it will not be condemned. The first thing to be done is to examine the old hive and find the queen; secondly, place six of the brood into the new hive, and shake out all the bees that may be on the side of the hive, and on the remaining comb, which does not contain the queen. Place the two remaining combs back into the old hive.

It will not be necessary at once to fill the old hive with frames, about four frames with full foundation will be sufficient for the time being; next, cage a young fertile queen in the new hive, and place wherever wanted. As most of the old bees will return home again, both the hives in about a

FRUIT GROWERS



COOL STORES

**Our Gravity Ball Bearing Roller Conveyor** will solve your handling and conveying problems by carrying your cases wherever you desire. **No Power Required.**

SUBSTANTIAL CONSTRUCTION — LONG LIFE — EASILY TRANSPORTED — FIRST COST IS ONLY COST

Made in Australia by **SCHUMACHER MILL FURNISHING WORKS PTY. LTD.**, Port Melbourne, Victoria

week's time will be of the same strength, and in five to six weeks' time both will be strong.

The apiarist is vitally interested not only in keeping his apiary free from disease, but also in ridding the whole district of it; also, as far as possible, the State, for at any time his apiary may become infected by means over which he has no control. There are different ways in which

#### Brood Diseases are Spread

from hive to hive, from apiary to apiary, and from infected to clean districts. The purchase of bees on combs, or of secondhand hives and frames and their transfer to other districts, the moving of apiaries to catch honey flows or to prevent starvation, and the introduction of queens and their worker escorts, are all means of continually re-stocking clean districts with brood diseases.

The most potential source of danger, however, is honey, coupled with the methods of old-time beekeepers, and the absence of commonsense regulations under the Bee Diseases Act. There is no need to enlarge on the danger of purchasing bees on combs, without thorough inspection before removal to a clean district.

The migratory beekeeper, who as a rule is of the more intelligent type of the craft, may be the means of trans-

ferring disease. Not that he would knowingly remove diseased colonies, but because his bees may absorb the infection during their temporary sojourn in one locality and carry it on to the next. The risk of introducing disease by means of queens is slight. Without a doubt, compared with honey, all other means of spreading diseases are insignificant.

There is first of all the box hive keeper (still present everywhere), who strains the honey in the open air, and throws old brood combs and refuse out for his own and other bees to clean up. Quite likely there is foul-brood. The disease is scattered broadcast by robbing bees to other hives, to bee trees, and either direct or eventually to frame hives, where the extractor assists in spreading it in the apiary.

The honey from the mashed combs of the box hives or from the bee trees, is tinned and sent to some sales-room. It may leak during transit, and give the bees somewhere on the way a chance. In the city the honey is purchased by a firm of honey packers, blended with other honey, and put into retail packages, each containing its quota of disease germs, and is scattered all over the country. When empty, the jars or tins are thrown away, the remnant of honey

cleaned out by bees, causing mysterious outbreaks of diseases in previously clean localities. The original tins in which the honey was marketed are also often returned to the country without being first washed.

A serious outbreak of foul-brood, two years ago, in a previously clean district, was traced to this source of infection. Since then, unwashed emptied honey tins are not accepted for transit on the Victorian Railways, and if the straining and exposing of honey in the open were made an offence, on the same principle as in the case of meat and other articles of food, much would be done to minimise the spread of bee diseases.—South Australian "Journal of Agriculture."

**For Promptness, Reliability  
and Careful Attention**

CONSIGN YOUR FRUIT TO

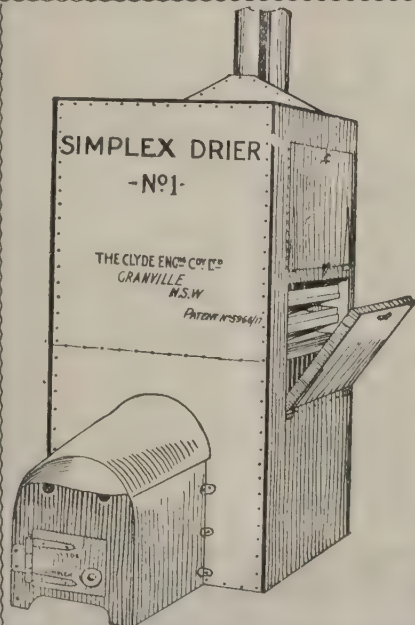
**RULE & BEAVIS**

FRUIT EXCHANGE,  
SYDNEY, N.S.W.

A TRIAL SOLICITED.

Shipping Number, 80.

Estab. 1888



## The Clyde Simplex Driers

**For Drying  
Fruit, Vegetables and other Products**

**NO MORE WASTE FRUIT OR VEGETABLES**

**SIMPLE — SELF CONTAINED**

Made in Sizes to suit

Householders

Small Orchardists

or  
Large Factories



**The Clyde Engineering Co. Ltd.  
GRANVILLE, N.S.W.**



# NOW IS THE TIME To Order Nursery Stock

**P**RESENT inquiries indicate that orchardists are going to plant more trees this season than were planted the past two years.

This means a shortage of **quality** nursery stock.

Of course—you can always buy cheap trees but the men who make money from their orchards don't want cheap trees. They won't gamble. They demand trees propagated from proven parentage, expertly and reliably grown, carefully handled in their digging, grading and yarding, carefully protected in their delivery—in other words, **GOODMAN TREES!**

The following are some highly profitable varieties greatly in demand:

## Apples

Delicious, Granny Smith, Jonathan, Cleopatra (N.Y.P.), Dunns, Romes, Londons, Yates, Gravenstein, Winesap (Stayman's), Rokewood, Statesman, Sturmer, Tasma (Democrat).

## Apricots on either Apricot or Plum Stock:—

Blenheim (Shibley), Hemskirke, Mansfield, Moorpark, Newcastle, Oullins' Early, Royal (American), Tilton and Trevatt.

## Plums

Angelina Burdett, Golden Drop, Diamond, Damsons, Grand Duke, Green Gage, Jefferson, Magnum Bonum, Pond's and President.

## Prunes

D'Agen (true French), Robe de Sargeant, Splendour, Sugar.

## Japanese Plums

Apple, Ballena, Burbank, Kelsey, Delaware, October Purple, Santa Rosa, Satsuma, Wickson, Wilson.

Also leading kinds in Cherries, Peaches, Pears, Nectarines, Quinces, Almonds, Walnuts, Small Fruits, Bushes and Ornamentals.

You can order GOODMAN Trees through our local agents or direct, and now is the time to do it. Catalogue of horticultural information mailed on request. Submit list of your tree requirements and we will be glad to send quotations.

# CHAS. J. GOODMAN

Picnic Point Nurseries

BAIRNSDALE, Victoria.

VICTORIA—(Continued from Page 124)

**PEACH WEEK.**

The Superintendent of Horticulture (Mr. J. M. Ward), who officiated as Judge to the Retail Fruiterers' shop window dressing competition for Peach Week, announced the following prize winners:—

Roy L. Cameron, Box Hill, 72 points—1st prize.

H. Tuck, Carnegie, 71 points—2nd prize.

W. Ives, Surrey Hills, 69 points—3rd prize.

Prizes of £1/- each were awarded to Messrs. F. Cameron, Maudesley Bros., Clayton Bros., J. G. Hewitt, R. G. P. Williams, W. Trivett, T. Johnston, J. H. Hewlett, A. Froumania, A. R. Judd.

In commenting on the display, Mr. Ward stated that the points considered when judging were:—40 points for attractiveness in display; 40 points for the advertising value; 20 points for originality of display, making a total of 100 points. Fifty per cent. of the fruit displayed in the windows had to be Elberta Peaches. Fruiterers in all suburbs and city competed and showed a keen interest in the competition.

The remarkable part that impressed Mr. Ward was the fact that in the past very few of the retail fruiterers have stocked Elberta Peaches, and yet when they have been attractively displayed, as in the case at the present time, the consuming public have shown their appreciation of this excellent Peach. In this respect one shopkeeper informed the Judge that he had sold 100 cases of this variety between Monday and Thursday; and at the time of Mr. Ward's visit he had 60 cases in the shop which he fully expected to dispose of by Friday night.

Many other fruiterers stated that they had sold from 70 to 100 cases in a few days and that the demand for this Peach was increasing. Practically all the shops visited were selling Elberta Peaches at from 5 lb. to 6 lbs. for 1/-, and a few of them were giving 7 lbs. for 1/-, for the purpose of letting the consuming public obtain Peaches at a low price.

It appeared to the Superintendent

of Horticulture that owing to the Peach drive many thousands of cases were now being sold that would otherwise have been allowed to rot in the orchard. By having Peach Week everybody was reaping the benefit, that is, the consuming public were obtaining Peaches at a low cost, the growers were obtaining a reasonable price—not perhaps as much as is necessary when the cost of production etc. is taken into consideration—and the State as a whole would be indirectly benefited.

**VICTORIAN FRUITGROWERS' CONVENTION.****Big Preparations for Gathering at Portland in May.**

Preparations for a big and representative fruitgrowers' convention at Portland in May are being made.

In addition to a wide list of sub-

**HAMBURG**  
(GERMANY)

**J. H. Lutten & Son**

Hamburg (Germany)

**Fruit Brokers & Auctioneers**  
Established 1835

**FINEST TABLE APPLES**  
**A SPECIALTY**

**Sale Room "Fruchthof"**  
Consignment of Apples Solicited  
Best market values and  
most favorable conditions  
Cash advances made if desired

jects for discussion, practical papers will be read and demonstrations given. As far as possible the subjects will be grouped, so that they can be dealt with by committees.

The social element will be featured, probably a cricket match, and concert by delegates.

Wives of delegates receive concession fares. Further details can be obtained from the Secretary, Mr. R. E. Boardman, 9 Queen-street, Melbourne.

**SHOWS TO COME.**

|                       | March |
|-----------------------|-------|
| Diamond Creek . . . . | 13    |
| Yarra Glen . . . . .  | 17    |
| Somerville . . . . .  | 17    |
| Red Hill . . . . .    | 24    |
| Lilydale . . . . .    | 24    |
| Croydon . . . . .     | 26-7  |
|                       | April |
| Garden Week . . . . . | 13-17 |
| Ringwood . . . . .    | 17    |

**VICTORIAN FRUITGROWERS' CENTRAL ASSOCIATION.****Advisory Board Election Methods Criticised.**

THE quarterly Council meeting of the V.C.C.A. was held at Melbourne on February 18, Mr. G. Mock presiding.

The resignation of Mr. F. H. Burbury was received with regret, and it was decided that he should be thanked for his services.

Mr. Lang reported on behalf of the sub-committee that, on their suggestion, Mr. R. E. Boardman had consented to be nominated for the secretaryship, and further "that an invitation be sent to all fruitgrowing districts in Victoria (whether affiliated with the Central or not) to send representatives to a convention, to be held at Portland in May next. Also that a definite scheme be prepared and placed before that convention for the effective organisation of the fruitgrowers of the State, and that the scheme be prepared and circulated in the various districts a month prior to the date of the convention." The report was adopted.

Mr. R. E. Boardman was elected secretary until the forthcoming conference at Portland.

**Producers' Defence Fund.**—A committee, consisting of Messrs. Mock, Tully and Boardman, was appointed to interview the trustees of the Rural Defence Fund and to obtain legal advice regarding the disposal of the funds.

**State Fruit Advisory Board.**—Mr. J. M. Ward stated that invitations had been sent to fruitgrowers' associations, whether affiliated with the Central or not, inviting them to nominate members on the Board. A list of those nominated will be sent to the associations for them to vote.

Mr. Thiele said the Government's action was splitting up, not uniting the growers.

**"WHAT'S WRONG WITH YOUR STOMACH?"**

No man or woman should have Indigestion or suffer from Constipation or Liver troubles. If the food you eat disagrees with you, all that you require is certain herbal juices to stimulate the digestive process. The ancient Egyptians understood this when they ate a small herbal decoction after every meal—and they were gross feeders! A.M.S. has been scientifically compounded from herbs to help the stomach and liver do their work effectively. Try a little every day, and you will soon abandon medicine altogether, as thousands of people have already done. All chemists 3/6, or by post 3/6 a bottle from T. A. Dickson, Chemist, Geelong, Vic.





Mr. Thomas, whilst approving of the democratic principle of election, doubted if the present method were correct, because of the unequal size of the associations.

Messrs. Lenne, Mair, Tully, Willoughby, Tompkins, Finlay, Pump and others requested the postponement of the election until May, when the Central Association could elect delegates in open conference. Messrs. Bailey and Thomas urged the taking of the vote speedily.

On the motion of Messrs. Lang and Tully, it was decided that—

“As it is anticipated that a strong organisation representing the whole of the fruitgrowers in Victoria will be formed at the annual convention in May, the Department of Agriculture be asked to allow the present representatives to act until permanent appointments be made by the convention to the State Fruit Advisory Board.”

On the motion of Messrs. Willoughby (Tyabb) and R. M. Finlay (Diamond Creek), it was also resolved—“That a deputation, consisting of Messrs. Mock, Tully, Lang, Lenne, and the secretary wait on the Minister and place the views of the Central before him.

It was decided, on the motion of Messrs. Carne and Tompkins—“That as Apple and Pear growers represented an acreage of 35,000 acres out of a total of 86,000 for the whole State, they should ask for four representatives on the board.”

The need for complete organisation was stressed by Mr. Ward, Superintendent of Horticulture, who said that, as a result of the recent Peach week, when 3600 cases of Peaches were handled by the two railway kiosks, and 1200 cases were sold on the Town Hall steps, it had been shown that, with decent organisation, 50 per cent. more fruit than was at present consumed could be handled in Victoria alone.

\* \* \*

#### DEPUTATION TO MINISTER.

A deputation, consisting of Messrs. Mock, Lenne and Boardman, waited on the Minister of Agriculture (Col. Bouchier) on February 19, asking on behalf of the Central Association that the elections to the Advisory Board be postponed till May, and that the Apple and Pear representatives be increased to four.

The Minister, in reply, declined to postpone the election, and promised to consider increasing the representation of the Apple and Pear section.

#### NYAH.

The Nyah Fruitgrowers' Co-operative Society Ltd. in presenting a summary of the season's operations to Mr. A. Fraser Gandie, Secretary, Nyah Branch, V.C.C.A., stated as follows:—

In reviewing the past season's operations for citrus fruits, we feel that on the whole the results have been highly satisfactory.

Being the first year that a central pack has been established, we think a continuance is justified, and trust that citrus growers will realise it is to their advantage to put the whole of their products through this well-organised avenue. Already our packing has created a very favorable impression, and during the season many eulogistic references were made to the “Murree” pack.

Last season proved conclusively that when fruit is packed under

#### The Packing House Method

the expense is justified by the results even with the poorer quality of fruit. With the large production of various districts and the poor quality fruit marketed, the tendency for low prices prevailed. However, the average maintained by this shed compares very favorably with the results obtained by any other organisation or individual.

Of the total marketed from this district we handled 44 per cent., and venture to state that had the whole of the district's fruit been put through our shed a generally satisfactory result would have been attained.

Certainly, those who did avail themselves of our service have reason to feel that their returns were to their betterment. Each year greater areas are coming into bearing, making a greater margin between the maximum of production and consumption. This suggests a greater reliance on efficient organisation, and it behoves citrus growers giving the matter serious thought.

#### Stability is Possible

by using an efficiently organised channel which has proved itself by results. Chaotic conditions are caused by growers following their own inclinations.

Looking forward to next season it felt that the knowledge gained from various sources, and an analysis of the results, will enable us to materially improve on last season. With that end in view we are exploring the various avenues for information, and are seeking out the best methods of grading and packing to ensure growers deriving the greatest benefits.

For the season ended we handled 9481 cases oranges and mandarins, 147 cases lemons and 130 bags lemons. The gross total realised by agents was £5254/8/9, against which agents' charges, railage, commission, etc., amounted to the sum of £876/13/7, or 17 per cent.; the said charges for case, grading, stencilling, forwarding, etc., were £858/6/10, or 16 per cent., leaving a net amount of £3519/8/4, or 64 per cent. to growers. The average net return per case works out at—Oranges, 7/2 per case; lemons, 2/8 per case; lemons, 12/3 per bag.

Taking everything into consideration, this is a very creditable result, especially in the case of oranges, the predominating fruit.

For the coming season we look forward to being entrusted with the full support of your Association's members, by placing their products with us, and we give our assurance that efficient service will be at your disposal.—(Sgd.) Nyah Fruitgrowers' Co-operative Society; Thos. F. McKay (Secretary).

#### GREEN MANURING.

##### Plant Leguminous Crops Now.

Now is the time for sowing Legumes, for turning under these Leguminous crops in the spring.

Green manuring is profitable, because:

—(1) The supply of humus and organic matter can be kept up in a simple yet efficient manner by sowing and ploughing in Green Crops; (2) Increases fertility; (3) Enriches the surface soil by nourishing materials which the crop during the period of its growth has drawn from the air and from the lower portions of the sub-soil, and this material is now placed within reach of the succeeding crop; (4) The soil is made quite loose and friable, and much more easily worked; (5) Will rid land in foul condition of weeds; (6) On all soils (sandy or heavy clay) deficient of humus, green manuring is effective; (7) Of special value in orchard work, where the green crop can be grown and ploughed under between the rows; (8) It is not only cheaper and more satisfactory than artificial manures, but it retains a far greater percentage of moisture than stable manure, and therefore adds considerably to the productivity of the soil; (9) During growing period is at all times good fattening fodder and beneficial for milk production.

Some of the green manure crops include Tares or Vetches, Clovers, Tick or Horse Beans, Field Peas, etc.

# The Fruit Trade

Market Reports and News Items.

**REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS, Advertising in this Journal.**

## NEW SOUTH WALES.

### Sydney.

Chilton, F., City Fruit Markets.  
Jenkinson, S. & M., Fruit Markets.  
Jenkins, John, Fruit Exchange.  
Lacey, Pang & Samuel Wong Ltd.,  
Thomas St., Haymarket.  
Rule & Beavis, Fruit Exchange.

### VICTORIA.

### Melbourne.

Coastal Farmers' Co-op. Society, Western Market.  
Colomble, H. G.  
Cave, F., & Co., Melbourne.  
Davis, J., Western Market.  
Dennys, Lascelles Ltd.  
I.F. & M. Co. Ltd.  
Lister, G., Western Market.  
Mills, A. & Sons, Western Markets.  
Mills, J. B., & Co., 9 Queen St.  
Mumford, J. G., 449 Flinders Lane.  
Pang & Co. Ltd., H. L., Little Bourke Street.  
Silbert, Sharp & Davies, Western Markets.  
Stott & Son, T., Western Markets.  
Tim Young & Co., Western Market.  
Vear, F. W., 49 William Street.  
Wade & Co., H. M., 471 Flinders Lane.  
Woolf, G., Western Market.

## QUEENSLAND.

### Brisbane.

Barr, A. S., Fruit Exchange.  
Collard & Mackay, Fruit Exchange.  
Cooksley & Co., Fruit Exchange.  
Finlayson & Son, Fruit Exchange.  
Geaves, H. V., Fruit Exchange.  
Robsons Ltd., Fruit Exchange.  
W. J. Whitten & Co., Fruit Exchange.

## TASMANIA.

### Hobart.

Jones & Co. Ltd., H., Fruit Exporters.  
Port Huon Fruitgrowers' Assoc.  
Peacock & Co., W. D., Fruit Exporters, and at London.

### Lannceston.

Bender & Co. Pty. Ltd., 110 Elizabeth Street.

## WEST AUSTRALIA.

### Fremantle.

Simper, H. J. & F. Ltd.

## SOUTH AUSTRALIA.

### Adelaide.

Silbert, Sharp & Bishop Ltd.

## NEW ZEALAND.

### Auckland.

Radley & Co. Ltd., Fruit Auctioneers.  
Turner & Growers Ltd., City Markets.

### Dunedin.

Co-operative Fruitgrowers' of Otago Ltd.  
Paterson, Thos., & Co., Vogel Street.  
Reilly's Central Produce Mart.

## ENGLAND.

### London.

Bradnum, Jas.  
Dennis & Cooper Ltd.  
M. Isaacs & Sons Ltd.  
Jacobs, E., & Sons, Covent Garden  
Joel, R., & Sons, 16, 17, 20 Russell St., Covent Garden.  
Margetson & Co. Ltd., Covent Garden.  
Monro, Geo. Ltd., Covent Garden.  
Poupert, T. J., Ltd., Covent Garden.  
Ridley, Houlding & Co., Covent Garden.  
Springer, Barney.  
Swann & Co., 3 Salter's Hall Court.

### Hull.

White & Son Ltd.  
B. & J. Shaw.

### Bristol.

Bristol Fruit Brokers Ltd.

### Liverpool.

Adam, James, Son & Co., 1 Temple Court.

### MacGeorge & Jardine.

### Coventry.

Boswell Bros. & Davis.

### Manchester.

North of England Fruit Brokers Ltd.  
—Australian Agent, N. V. Wade, 8 Bridge St., Sydney, N.S.W.

### Southampton.

Bristol Fruit Brokers Ltd.

### Newcastle.

B. & J. Shaw.

### Cardiff.

Connolly, Shaw & Co.

## WALES.

## SCOTLAND.

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## DENMARK.

### Copenhagen.

Kobenhavns Fugtauktioner.

## GERMANY.

### Bremen.

Fruchthandel, Gesellschaft.

### Cologne.

Algemeene Vruchten Import Maatschappij.

### Hamburg.

A. Heimer, P. H., & Son., Fruchthof.  
Algemeene Vruchten Import Maatschappij.

Lutten, J. H., & Co., Hamburg.

Stier, Aug., Fruchthof, Repr. J. B. Mills & Co., 9 Queen St., Melbourne.

## British and Australasian Market Reports.

### Great Britain.

London (16/1/26).

The following are the prices ruling at Covent Garden, as published in the "Fruit, Flower and Vegetable Trades' Journal," 16/1/26:—

Apples, English Cox's Orange, 6/- to 16/- half sieve; others, 1/6 to 8/- per sieve; Nova Scotian, Golden Russet, 30/- to 35/- half sieve; others, 10/- to 20/-; British Columbia Jon., 12/- to 14/- per case; Canadian, 12/- to 20/- per barrel; York Imperials, 34/- to 37/-; Washington Newtowns, 15/- to 18/- per case; others, 11/- to 14/- . Grapes: English Colmar Muscat, 9/- to 15/- case; Colmar, 1/8 to 4/-; Alicante, 2/- to 3/6; Almeria, 10/- to 25/- per barrel. Lemons: Messina 300's, 20/- to 35/- per case. Oranges: Denia and Valencia 240's, 24/- to 40/-; 300's to 504's, 15/6 to 25/- . Pears: California Winter Nelis, 20/- to 24/- per case; Beurre Anjou, 18/- to 22/- . Bananas: Fyffe, 13/- to 25/-, drum and crates; Hoya, 15/6 to 22/6.

Cape Fruit.—Apricots, 4/- to 6/- per box; Peaches, 4/- to 10/-; Plums,

3/- to 6/-; Pears, W.B.C., 6/- to 8/-; Clapp's Favorite, 5/- to 6/-.

### New South Wales.

Mr. F. Chilton, City Fruit Markets, Sydney, reports under date 24/2/26, as follows:—

Queensland Fruits: Apples (Stanthorpe district), Jonathans 12/- to 14/- per bus. case; Bananas, 14/- to 23/- per case; Pines, Smoothleaf, 9/- to 12/-; Ripley, 7/- to 10/- . New South Wales Fruits: Bananas, 14/- to 23/- per case; Lemons, 10/- to 18/- per bus. case; Oranges, Valencia, 12/- to 20/-; Eating Apples, Red sorts, Jonathans, etc., 8/- to 14/-; Cooking Apples, Green varieties, 6/- to 9/-; Pears, W.B.C., 6/- to 10/-; Quinces, 3/- to 7/-; Peaches, 3/- to 10/- per half-case; Passions, 8/- to 14/-; Tomatoes, 3/- to 6/-; Plums, Dark, 2/6 to 7/-; Grapes, Black Hamburg, 6/- to 8/-, Black Muscat 8/- to 12/-, White Muscat 8/- to 12/- . Victorian Fruits: Apples, Jonathan, 10/- to 13/- per bus. case, Alf. 6/- to 8/-; Lemons 12/- to 18/- Pears, W.B.C., 7/- to 11/-; Peaches, 8/- to 12/- . Tasmanian Fruits: Apples, Worcesters 8/- to 12/-, Gravensteins 8/- to 11/-, Alf. 6/- to 8/-, Alex. 7/- to 9/-.

The prolonged drought and heat wave have had the effect of considerably increasing the demand for fruit generally and green vegetables, but, at the same time, have greatly damaged crops in many districts. Prospects, in the near future at all events, appear very favorable here, particularly for good quality Apples, Pears, Pines, and Grapes.

### Victoria.

Melbourne (27/2/26).

The following are the prices ruling at the Western Market:—Apples: Medium fruit hard to dispose of. Choice Gravenstein, 9/- to 11/-; standard, 6/- to 8/-; other varieties, 3/- to 5/-; good cookers, 3/- to 6/- . Lemons: Strong inquiry. Special good counts, 9/- to 11/-; standard, 7/- to 8/- . Oranges: Valencias, 18/- to 20/- . Grapes: The market over-supplied with medium quality fruit. Special, 8/- to 10/-; few extra, 12/-; standard, 6/- to 7/- . Tomatoes: Stocks in hand were in an overripe condition. Special, 6/- to 9/-; extra firm, to 10/-; standard, 5/- to 6/- . Peaches: In short supply. Special white, 10/- to 12/-; standard, 8/- to 9/-; special yellow, 8/- to 10/-; standard yellow, 5/- to 7/- . Pears: Special, 6/- to 8/-; standard, 3/- to 5/- . Pineapples: Queen, choice, 9/- to 12/-; special, to 13/- . Plums: Best, 4/- to 6/- . Bananas, choice, 15/- to 17/-; special, up to 22/-.



**South Australia.****Adelaide (20/2/26).**

Apples: Eating, 6/- per bushel case; cooking, 4/-. Grapes: Dark, 9/-; Pears: Eating, 6/- to 8/-; cooking, 4/- to 5/-. Peaches, 11/- to 12/-. Plums, light, 5/- to 6/-; Damson, 11/-; Passion Fruit, 20/-; Bananas, to 28/-; Lemons, 9/-; Nectarines, 14/- to 16/-; Oranges, common, 12/-; Navels, 14/-; Pineapples, 15/- to 17/-.

**Western Australia.****Perth (20/2/26).**

Apples: New season's dessert, choice 14/6, best 5/- to 11/- dump case; flats, 5/- to 8/-, a few at 10/-; cooking, best dumps, 5/- to 10/-; flats, 4/- to 7/-, a few at 9/-; Pears, 6/- to 8/- dump, 3/- to 7/- flats; Peaches, prime, 12/- to 15/3; others from 8/-; Plums, prime, 9/- to 12/6, few at 14/-; Lemons, prime, 4/- to 8/6; others from 3/-; Valencias, 9/- to 17/6 dumps, flats 7/6 to 12/-; Nectarines, 7/- to 12/-; Passion Fruit, 3/- to 5/- flats; Grapes, 5/- to 7/-, a few at 10/6 for open cases, 4/- to 5/6 closed.

**Tasmania.****Hobart (13/2/26).**

Apples: Gravenstein, best, 5/6 to 6/- per bushel case; medium, 4/- to 4/6; W.P.M., best, to 6/5; medium, 4/- to 5/-; Alf., 4/6 to 5/-. Apricots, best, 6/- to 6/6; medium, 4/- to 5/-. Plums, light, 4/- to 6/-; dark, 3/6 to 4/6. Pears, W.B.C., 4/- to 5/6, 2/6 to 3/6 half bushel case.

**Queensland.****Brisbane (23/2/26).**

Apples, eating, prime, 7/- to 9/- per bushel case, others 3/- to 6/6; cooking, prime, 6/- to 7/-, others 3/- to 5/-. Plums, prime, 6/- to 8/-, others 4/- to 5/-. Peaches, prime, 7/- to 9/- half bushel case; others, 4/- to 6/-. Passion Fruit, prime, 7/- to 9/- half bushel; others, 4/- to 6/-. Lemons, prime, 8/6 to 10/- half bushel; others, 3/6 to 8/-. Pine apples, prime, rough leaf, 7/- to 8/- per case; others, 4/- to 6/-; smooth leaf, prime, 5/- to 7/-; others, 4/- to 5/-.

**New Zealand.****Dunedin (18/2/26).**

Reilly's Central Produce Mart Ltd., Dunedin, report as follows:—A keen demand for choice dessert fruits, Apricots, Greengages, Crate Peaches, C.O.P. Apples, choice Williams Pears commanding high prices. Onions, Potatoes and guaranteed Eggs short of requirements.

We sold:—Rasps, pottles 1/-, buckets 10d., 11d.; Mulberries, 9d. per lb. Pears, choice desserts to 4d., others to 2½d.; cookers, 2½d.; Grapes, locals 2/9, Oamaru 1/6, 2/9. Christ-

church Tomatoes, 1sts to 1/3, 2nds to 10d.; Otago, Centrals to 9½d., outside to 6d., Nelson to 8d.; Greengages to 5½d., choice bottling to 4d.; Nectarines, desserts to 6½d., jam to 4d.; Peaches, choice dessert to 7½d., cooking to 4d.; Apricots, desserts to 6½d., bottling to 4½d.; Green Peas, best to 3d.

Apples, Cox's to 14/6, Gravensteins to 12/6, other desserts to 13/-; cookers, choice to 8/-, others to 5/6; Pineapples, 28/-; Passions, 24/-; Lemons, Italian, 22/-; Oranges, 30/-; Bananas, ripe 35/-, Raratonga green 26/- per case.

# Ringwood SHOW

Saturday  
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1926

THE LEADING AUTUMN SHOW  
OF THE STATE

FRUIT, FLOWERS,  
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Prices for Advertisements under this heading are as follows:—

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**SITUATION VACANT.**—Required by Reputable Firm, MAN, not over 35, with knowledge of fruit growing and orchard procedure, for outside representation based on Sydney.

Apply first place by letter to Advertiser, Box 630, G.P.O., Sydney.

## CITRUS PACKING HOUSE MANAGER.

Applications are invited for Position of MANAGER and FOREMAN for Citrus Packing House for coming season, six months' duration. Estimated quantity, about 20,000 cases. Must be thoroughly acquainted with all duties appertaining to such position. Duties to commence not later than 1st May, 1926. State salary required. Applications to be in hands of

J. R. Morris, Chairman of Directors,  
Mapleton Co-operative Citrus  
Packing House Ltd.,  
Mapleton, Queensland, not later than 15th March next.

**Little Things.**

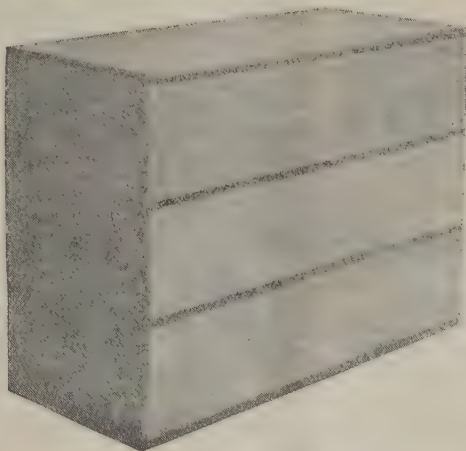
If God were pleased to satisfy my every whim,  
I'll tell you just the little things I'd ask of Him.  
A little love—a little love—for that comes first of all,  
And then a chance, and more than one, to raise them up that fall.  
Enough—not overmuch to spend,  
And discourse that would charm me, with one familiar friend.  
A little music, and perhaps a song or two to sing.  
And I would ask of God above to grant one other thing:  
Before old Death can grimly smile and catch me unawares;  
A little time to rest awhile.  
To think—and say my prayers.  
—E. T. Raymond.

An official stood above the gangway of a ship and cried continually to the passengers as they came on board:—

"First class to the right! Second class to the left!"

Up stepped a pretty young woman, carrying in her arms a small baby. As she hesitated, the official leaned forward and asked, in his chivalrous way, "First or second?"

"Oh!" exclaimed the young woman, her face red as a wild rose, oh—er—it's—it's—not my baby at all!"



Australian Apple and Citrus Dump Bushel Case.

## SOME ADVANTAGES IN FAVOR OF IMPORTED CASES

- (1) Full drawback of duty allowed on all cases exported.
- (2) 1/3rd less freight than on Hardwood cases.
- (3) 25% rebate on rail freight for full trucks.
- (4) All timber cut to exact sizes making it an easy matter to assemble a symmetrical case.
- (5) Every piece of timber fit and ready for use, thereby eliminating waste.
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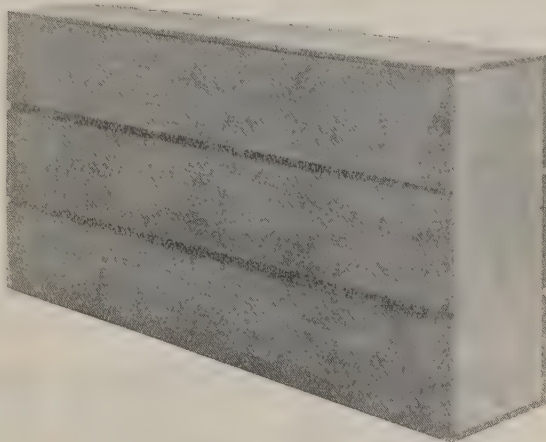
*Cut to Australian Standard Sizes*

DUMP BUSHEL with one piece top and three equal piece side

UPRIGHT BUSHEL with one piece top and three equal piece side

DRIED FRUIT CASE with one piece side and two equal pieces tops and bottoms

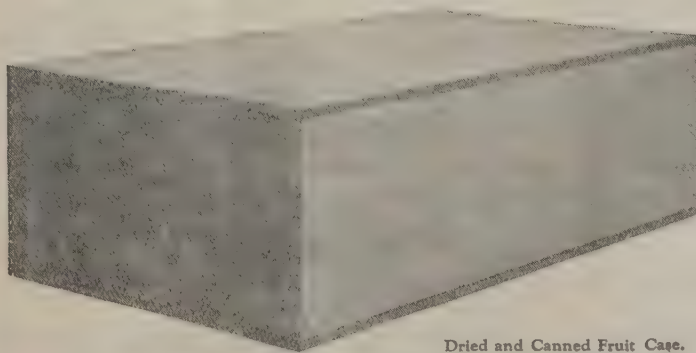
CANNED FRUIT with one piece side and two piece tops and bottoms



Upright Bushel Case with Centre Partition.

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## Grading Fruit.

### A Study of Patented Devices.

By George A. U'Ren, Patent Attorney,  
"Henty House," Melbourne.

THE information furnished in this article has been drawn from published patent specifications of the Commonwealth. The object is to induce original thought or, at all events, to excite the imagination and the powers of observation, concentration and analysis. The movements and functions necessary to grade various classes of fruits differing in weight, shape, size and other particulars, without bruising, form an interesting study.

Looking back over the last twenty one years it will be found that the inventor has paid not a little attention to grading devices. One of the earliest types of graders for Apples has consisted of a number of belts (either superposed or in stepped relationship) having a series of holes therein of varying sizes. The fruit has passed from one belt to another until it has reached a hole sufficiently large to pass it to directional chutes or receptacles.

Other ideas have used a laterally inclined belt and/or deflector for the purpose of delivering fruit against spaced vertical rollers or against a grading board having fruit delivery spaces varying in size. Partitions have been located above the belts to provide raceways, and ribs carried by the belts and other devices have been provided to prevent the fruit lagging.

A pair of differentially driven diverging belts has also been suggested to provide a delivery slot varying in width and through which the fruit has gravitated, according to size, to receiving chutes. The slot may be formed by two laterally inclined and longitudinally diverging flat belts, or by a number of pairs of round belts.

ESTABLISHED 1891

## AUG. STIER

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## Special Notice to Fruitgrowers

In response to numerous requests from growers for information as to who are members of the WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA, the following list is given. All are members of the above Association, and are registered firms:—

H. M. Wade & Co., 471 Flinders Lane, Melb.  
T. Stott & Sons, 11 Western Market, Melb.  
F. Booth & Sons, 15 Western Market, Melb.  
H. L. E. Lovett & Co., 410 Flinders Lane, Melbourne.  
A. E. Pitt, 12 Western Market, Melbourne.  
J. Davis, 13 Western Market, Melbourne.  
G. Woolf & Sons, 3 Western Market, Melb.  
W. S. Tong, 4 Western Market, Melbourne.  
Silk Bros., 441 Flinders Lane, Melbourne.  
J. G. Mumford, 449 Flinders Lane, Melb.

J. W. Ross, 6 Western Market, Melbourne.  
W. Sweeney, 14 Western Market, Melb.  
J. H. Young & Co. Pty. Ltd., 7 Western Market, Melbourne.  
D. Smith Pty. Ltd., 480 Flinders Lane, Melb.  
Silbert, Sharp & Davies Pty. Ltd., 17 Western Market, Melbourne.  
A. Millis & Sons Pty. Ltd., 5 Western Market, Melbourne.  
W. A. Watkins, 62 King Street, Melbourne.  
P. A. Patrikeos, 31 William Street, Melb.

The whole of the QUEENSLAND FRUITS sold in Victoria, is handled by members of the WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA, under appointment by the Committee of Direction of Fruit Marketing, Brisbane, Queensland.

GROWERS PROTECT YOURSELVES by consigning to members of the WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA.

Correspondence is invited by the Association.

J. D. FRASER, Secretary, 325 Collins Street, Melbourne.

It has also been proposed to use a belt having a series of holes therein. The belt has been split longitudinally and the two portions have been adapted to separate in order to progressively enlarge the openings.

The belt class of apparatus also includes another type. In this bisected blocks or interlinked fruit beds are provided, each having part circular members adapted to progressively open apart or separate as the belt moves forward. The fruit is discharged, according to size, into receiving compartments.

Another chain idea has suggested a series of links each comprising a number of members nesting one within the other and adapted to drop at predetermined intervals to provide holes increasing in size as the chain progresses. Instead of links a series of small travelling hinged boards may be superposed to form groups or nests, each board having a hole of different size formed therein. Endless chains may also support lateral conveyors having varying sizes of holes therein.

Now let us consider apparatus using conical, stepped, and other rollers as the grading element, either per se or in conjunction with belts. In one of the earlier types the fruit to be graded is delivered to a pair of rope

belts running between longitudinal rollers having different diameters. Variable spaces are thereby provided through which the fruit falls into lateral receiving chutes. A flat belt could be used in conjunction with a conical roller, however, in such a manner that the latter will push the fruit off the belt at different points, according to size.

Another idea has provided a series of threaded or helical rollers located diagonally above a feed belt, at predetermined angles and distances. The fruit passes beneath the rollers until the space between a particular roller and the belt becomes too restricted. The roller then diverts the fruit to a receiving receptacle. Intergeared helical rollers have also been used to provide a diverging grading slot, rubber tubing being wound upon the rollers to provide the threads.

A single stepped roller having a plurality of diameters may be used in conjunction with an angular belt to provide a gradually widening grading slot. A further idea has provided a board having holes of varying sizes located beside a threaded roller. This has been used in conjunction with delivery belts leading from the holes in the board to receiving bins. An idle longitudinal roller may be used to

provide openings of different sizes, in lieu of the grading board.

The broad idea of using a stepped roller has been used in conjunction with several other appurtenances, delivery belts, directional boards, feed hoppers and tables, and a series of

### Red Hill and District Agricultural and Horticultural Societies

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Will be held on the SHOW GROUNDS  
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Admission:—

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Further particulars, Schedules, and Entry Forms from—

**H. W. Amos, Hon. Sec., Red Hill.**

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## Important News for Orchardists

# “ROSEBERY”

## (Power and Hand) SPRAY PUMPS

“Rosebery” is a name which fruitgrowers of both New South Wales and Queensland have long recognised as being associated with Highest Grade Spray Pumps.

Embodying numerous improvements, and backed by a high reputation for efficiency, the entry of “Rosebery” Hand and Power Spray Pumps will be welcomed by Orchardists and others throughout Victoria.

Our close association with men on the land during the last 25 years in connection with Imperial Engines and Tractors, places us in a particularly fine position to cater for the individual needs of users of sprayers. We are well equipped with our huge machinery works to render a first class after sales service. Advice on matters affecting orchardists will be readily supplied.

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compartments disposed below the grading devices. Successive tables and divisional curtains have also been employed to assist in the separation of the fruit into different grades. Tables have formed the basis of the grader in some inventions just as the belt and/or roller has formed the principal feature of others.

One of the most interesting graders of the table type has provided a reciprocatory table having gable-like ribs or ribs having inclined upper surfaces. The ribs vary in pitch and inclination. The articles being graded follow along the pathways formed by the ribs, according to size and weight.

A different class of table has had a series of holes formed therein of varying sizes. The holes have been inter-connected longitudinally by a

series of slotways. Longitudinal rising and falling slats have been accommodated in the slotways to keep the holes clear and to prevent them from being jammed with fruit. Divisional pieces have been arranged beneath the table to divide the holes into groups or grades. In another idea a shaking trough having orifices in its bottom has been used in conjunction with a lever to clear each orifice.

Small hinged and progressively counterweighted trap doors have formed the chief characteristic of another table. A belt having a series of flaps therein passes over the table. Fruit fed to the belt falls through a flap and trap door when it reaches a counterweight which it is heavy enough to overbalance. A number of grading chutes are located beneath the trap doors.

There is yet a further type of grader. This utilises a cylinder or drum as the grading element. One of the earlier designs has provided combs over which the fruit is fed to a grading drum having a series of receiving holes in its periphery. Within the drum is a series of pockets operated by levers and links to discharge the fruit at predetermined positions into grading compartments.

A drum resting upon and driven by friction rollers may be used. Formed in the periphery of the drum is a series of fruit discharging holes arranged in helical lines. Between the lines of holes, string is diametrically threaded to form helical partitions and passageways. Should a piece of fruit be caught in a discharge hole it is expressed therefrom by contact with the rollers as the drum rotates.

A variation of the foregoing has consisted in mounting a series of superposed discs on a spindle in a vertical drum. Each disc has a series of grading holes therein. Beneath each disc is an arm to lift clear any fruit caught in the holes. Around the exterior of the drum is a spiral chute

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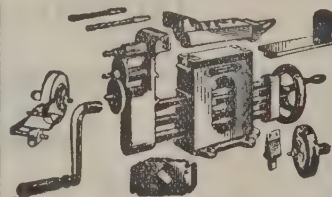
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communicating with an opening formed in the drum wall at the level of each disc. The fruit that cannot pass through the holes of a disc is discharged through the relative opening in the drum wall.

A longitudinal wire mesh drum has been proposed. This has been provided with spiral plates fringed with a wire brush and adapted to pass the fruit through the drum against the wire mesh, thereby freeing the stalks and stems. The fruit is then conveyed to a winnower or riddle having perforated plates and a blower.

In another idea the fruit is fed down the side of a rotating cone and is delivered against an outer wire conical and stationary casing. It is then conveyed to winnowing or shaking tables operating in conjunction with blowers. Articles have also been fed to successive combination screens having openings of different sizes,

with riddles located beneath the screens.

We may now consider miscellaneous types, by no means the least interesting. One of the simplest has consisted of a box divided into compartments. The box is provided with an inverted lid or cover having a series of wires or laths spaced apart to provide a series of openings of different sizes. Between the cover and the box a series of springs are interposed to facilitate oscillation of the cover. The fruit falls through the openings into the compartments when the cover is shaken.

Differing materially from the foregoing is a grader having a circular grading element provided with a series of compartments and sinuous pathways or guides. Above the element is a disc having a series of holes therein. These are variable by means of sliding members operated by engage-

ment with the sinuous pathways as the disc rotates. Feed chutes are located at different points above the disc, each chute being provided with a delivery spider wheel and a feed chain operating synchronously with the disc and the slides.

Now visualise an inverted conical hopper having an elliptical or irregular hole formed in its bottom. A ratchet wheel is located above the hole. The ratchet teeth, as the wheel rotates, drive the fruit round the elliptical opening. When the opening is large enough the fruit passes through it to a series of grading receptacles located below the hopper.

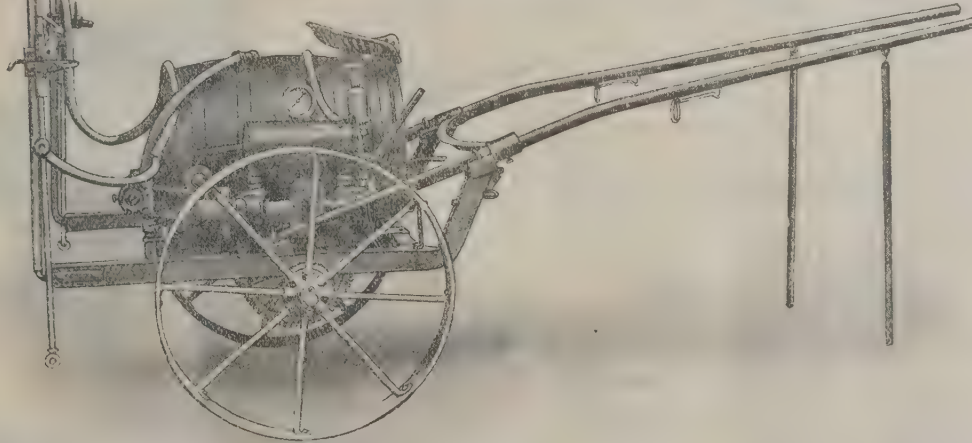
Another very simple construction consists of a revolving cone surrounded by a wall having an exit slotway varying in height. The fruit is moved around the wall by the table and passes through the slotway at different points, according to size.

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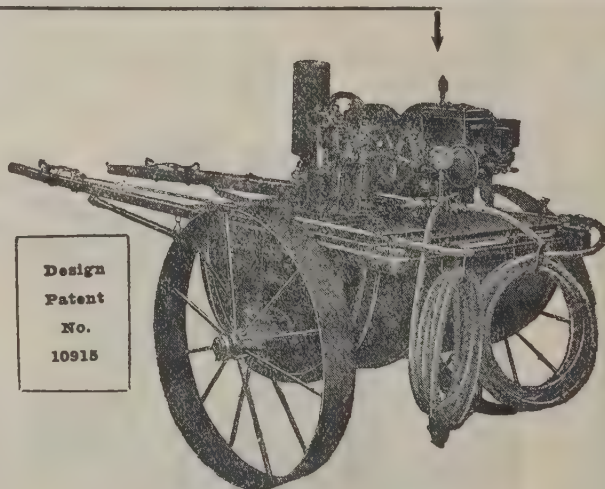
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Another table has a series of holes therein, varying in size, located between an outer and an inner circumferential upstanding wall or lip. A series of holes is also provided in the table in the space encircled by the inner wall or lip. A plurality of radial arms or wipers are arranged above the rotating table and adapted to roll the fruit over the holes until it encounters a hole large enough to receive it.

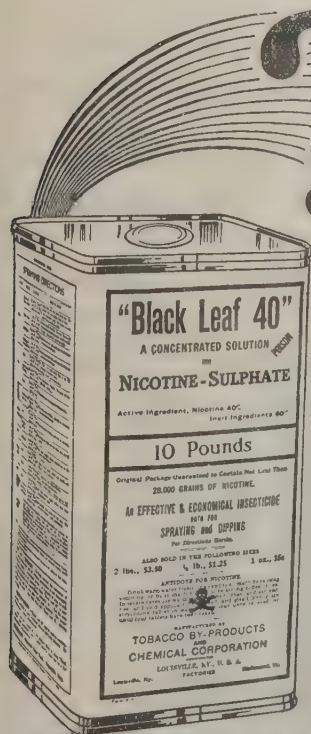
Still another departure has included a tripod. This supports the hub of a wheel having radial spokes upon which the fruit is placed by hand. The tripod also supports a series of radial compartments beneath the wheel. Above the wheel is a series of radial wipers adjustable in height. As the wheel is rotated the fruit remains on the spokes until it encounters a wiper. It is then tipped into one of the compartments.

The class of grader employed is not pertinent to the next invention, provided the graded fruit is delivered

through chutes or similar channels. The idea comprises an attachment to the chutes. It consists of a first receiving incline or chute. This communicates with a reversely projected chute communicating with a third and final chute having a fabric or other flexible bottom. The end of the fabric is capable of being hooked up, thereby forming a pocket into which the fruit may gather while the packer is changing the fruit boxes or cases.

The field of invention is well nigh unlimited both for improvement and decisive originality. Grading all classes of fruit expeditiously and efficiently is of material importance to the fruit growing industry. Notwithstanding previous conceptions, the opinion is ventured that the last word has not yet been said upon the subject.

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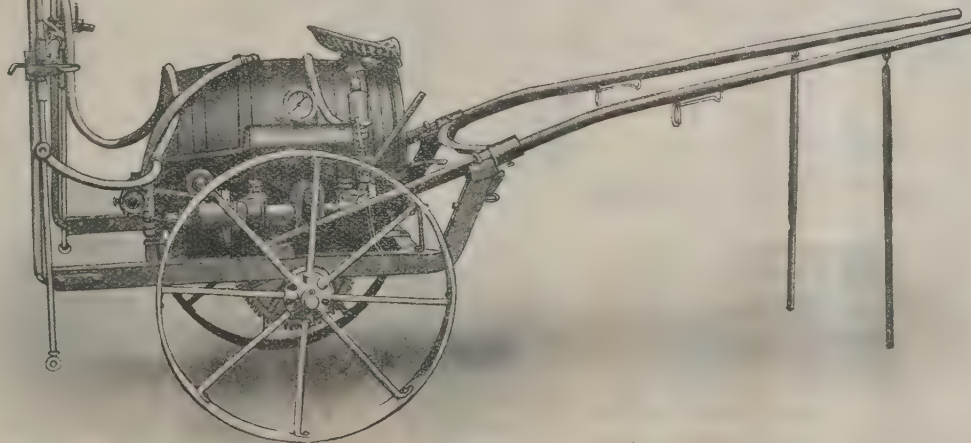
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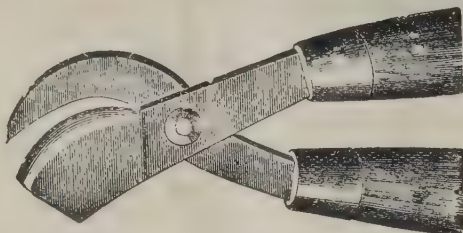
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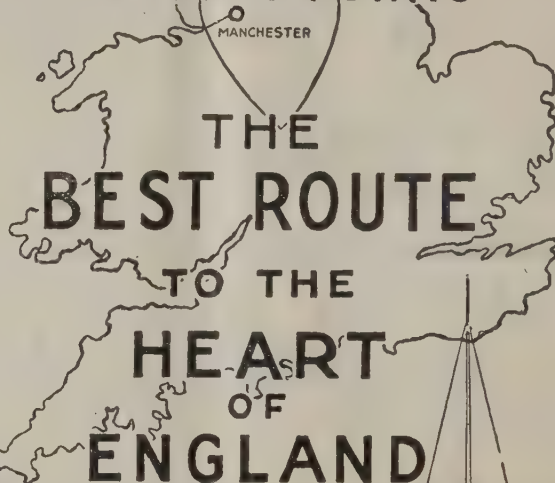
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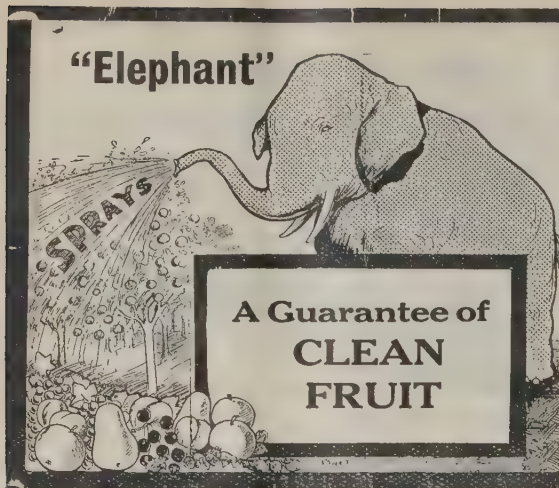
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**"FRUIT WORLD OF AUSTRALASIA."**

Representing the Deciduous, Citrus and Dried  
Fruits Industry of Australasia.

Published the First of each Month.

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"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States, as set out below.

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**NEW SOUTH WALES—8 Bridge St., Sydney (J. H. Coghill, Mgr.)**

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E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director: HON. L. M. SHOOBRIDGE, M.L.C.

# Editorial Chats



**R**EADERS will note with interest the fact that \$750,000 has been placed on the estimates in U.S.A. for horticultural research work, the details of which are included in an article in this issue.

A Bill is also before Congress to allocate \$75,000 for a National Arboretum for plant research and education.

This should stimulate the leaders of thought in Australia to move the authorities to develop a definite programme of research work in horticulture.

The report of Sir Frank Heath to the Commonwealth Government, deals exhaustively with the reorganisation of the science and industry, and involves a maintenance expenditure exclusive of grants of £40,000 the first year, £50,000 in the second year and finally £100,000. The report recommends, amongst other items, research into various problems affecting the fruit industry.

"There are three outstanding impressions on my mind," stated Sir Frank recently, "(1) The vastness of the subject and the shortage of trained men. (2) The wide distances and the need for co-operation between the States and the Commonwealth in dealing with scientific investigations. (3) The necessity for a concentrated attack on the problems affecting primary industries."

Fruitgrowing and commercial horticulture are subjects which might well receive special attention just now.

\* \* \*

**W**HAT is necessary, of course, is strong virile Institute of Horticulture—a body comprising thinking people and leaders in the community—to give weight to requests for horticultural research.

The experience gained by the Royal Horticultural Society of England is of great value to us in this young country. We are now feeling our way. The day is not far distant when the foundations of a splendid horticultural Institute will be laid in Australia.

"Garden Week," which is to be held at the Olympia, Melbourne, from April 13 to 17, is a forward move; it is appreciated by the general pub-

lic, and it has all the possibilities of future greatness.

Fruitgrowers would do well to send exhibits of fruit and stand right in behind the movement.

**TRUE CO-OPERATION.****Australia Can Benefit by America's Experiences.**

In a report to Congress, Mr. W. M. Jardine, Secretary for Agriculture in U.S.A., compiled an illuminating article. It is published in this issue, and readers are requested to study it carefully. Here are a few of the points extracted:—

Education is needed to increase the spirit of co-operative marketing.

While not adopting a "let alone" policy, the movement should not be hampered by Government regulations. Supervision and control are not desirable.

Flexibility, not rigidity, is desired with scope to win into executive positions, men of outstanding ability.

The Government should foster agriculture without seeking to dominate or direct it.

The only guarantee of an adequate and dependable supply of agricultural products is a prosperous and contented agricultural population.

Business agriculture to-day demands a better balance between production and distribution.

Co-operative marketing does not aim to secure the profits of independent merchants, but rather to effect better merchandising methods—better packing and grading, and more effective distribution.

**ORCHARD TAX IN NEW SOUTH WALES.**

March 31 is the latest date allowed for orchardists and nurserymen in New South Wales to register under the new Act, and applies to all owners of orchards, vineyards and nurseries over a quarter acre in size.

The Department are supplying application forms. Owners are levied at the rate of 1/- per acre, and the penalty for failure to comply with the Act is £50.

There is dissatisfaction in many quarters, the growers being ignorant of their responsibilities,

**ARSENIC ON APPLES.**

Only Very Slight and Harmless  
Traces.

The following report from a standard firm of analytical chemists, is typical of tests re arsenate or lead on Australian Apples.

Analyses from various districts have been regularly made during the season. The information is as follows:—

Report on two samples of Apples marked "Hurstbridge" and "East Burwood," received from the Metropolitan Fruitgrowers' Association, Bishop Street, Box Hill, per J. Aspinall, Secretary.

Upon analysis the samples were found to contain the following amounts of arsenic, calculated as arsenious oxide, As 2O<sub>3</sub>, per pound:—

Hurstbridge—1/275 of a grain.

East Burwood—1/450 of a grain.

(Signed) DUNN, SON & STONE.  
Melbourne Analytical Laboratory,  
193 Collins Street, Melbourne.

### ADVERTISING AUSTRALIAN FRUIT.

£8000 From Federal Government

The National Federation of Fruit and Potato Trades of England, is about to repeat its advertising programme to assist the sale of Australian fresh fruits, and the Federal Government has made available £8,000 on a pound for pound basis to assist the scheme.

This fact will be noted with satisfaction, especially as it seemed for a time that the Australian Government would adhere to its expressed intention of waiting till the newly-appointed director of publicity, Mr. A. E. Hyland, arrived in England in June. To have missed advertising Australian fresh fruit would have been a mistake, especially as the "arsenic on Apples" bogey, has done much harm, and to have delayed the advertising programme would have meant that the funds would have been used almost entirely in assisting to sell only canned and dried fruits.

During February fruitgrowers in the Metropolitan area enjoyed a well-arranged picnic per s.s. Weroona, to Queenscliff.

Messrs. Angus and Leavy, fruit merchants and exporters, have opened up their new stores in the busiest centre of the city fruit markets, Sydney.

## Fruit Canning in Victoria.

Ardmona Factory Officially Opened.

Output 3,000,000 Cans.

**F**RUITGROWERS at Ardmona—a pioneer irrigation orchard settlement—are glad that their new factory, which adjoins the Mooroopna railway station, is in running order. Up to the date of the official opening, on March 18, about one and a quarter million cans had been processed, and before the season ends, it is confidently anticipated that the output will be 3,000,000 cans.

The factory cost over £40,000, the money being advanced by the Government to the Ardmona Fruit Products Co., an organisation which for several years has operated solely for dehydrating fruit, on the security on the plant and machinery, and the uncalled capital on the 40,000 £1 shares, of which 90 per cent. was subscribed to by local growers. By reason of the proximity of the cannery, the dehydration plant will be able to operate more effectively than in the past; fruit too ripe for canning is just right for the drying process.

There are three lines of canning machinery, two put up by John Heine and Son Ltd., Sydney, and one American. Room has been left for three more lines of machinery. Tins are supplied by the Shepparton Cannery. Although the factory can process 3,000 tons of fruit for the season, this quantity is less than a fourth of that produced on the Ardmona area, consequently large quantities are sent to Melbourne and Sydney.

Addressing a large crowd at the official opening ceremony, the Premier, Mr. John Allan, said the factory had been built as a result of the success of the Shepparton and Kyabram Co-operative Canneries. The machinery was 90 per cent. Australian made. Under good management, which was already evidenced, the good fruit which was produced, should command a satisfactory sale.

After Messrs. Bouchier (Minister for Agriculture), and Prendergast, Leader of the Opposition, had spoken in terms of congratulation, the Premier set the machinery in motion.

Subsequently the visitors were entertained at lunch by the Ardmona Fruit Products Co-operative Co. In proposing the toast, "Our Parliaments," the chairman, Mr. V. R. McNab, said that for the past 20 years the Ardmona district had produced

more canning fruits than any other district in the Commonwealth. Of the 3,000,000 tins canned at the new factory, one-third could be sold in Australia, and the balance would need to be exported: for this purpose a bounty by the Federal Government was necessary. Quality was the sole plank in the company's programme. If fruit were shipped in the next six weeks, it would reach London ten weeks ahead of the new Californian pack, thus the Government might well give prompt attention to the bounty question, to enable export to be conducted at a price which would return working costs.

Interesting addresses were made in reply by the Premier, the Minister for Agriculture and Mr. Prendergast.

In proposing the toast, "The State Rivers and Water Supply Commission," Mr. A. W. Fairley (chairman of directors, Shepparton Cannery), congratulated Ardmona in having the factory erected in record time. If a profitable export market could be secured, the future was rosy, and growers would again receive £15 per ton for their fruit. The recent overseas freight reduction, which worked out at 4½ per doz. tins less than previously, was helpful.

In responding, Mr. W. Cattanach, Chairman Water Supply Commission, said Great Britain was our best market, and the growth of the Imperial preference spirit was a hopeful sign. China and the Near East imported £1,000,000 worth of fresh, dried and canned fruit, of which Australia supplied only £3,000 worth.

The toast, "The Co-operative Movement," was ably proposed by Mr. W. Young, who urged closer co-operation between the growers in supplying fruit to the factory, and that the three Goulburn Valley canneries should co-operate in a selling organisation. Continued assistance on the part of the Government was necessary.

Mr. Colbert (Kyabram Cannery), responded, and promised the support of Kyabram in a co-operative selling campaign, which would reduce overhead expenses.

Mr. E. L. Young proposed the toast, "The Contractors," and congratulated them on their helpful work in so rapidly completing the factory equipment.



Responses were made by Messrs. Askw, Rigby and Heine. The latter suggested that the Government could assist in the technical side of fruit canning by appointing men to undertake chemical research.

Mr. E. J. Mulvaney (Director of the Department of Markets), apologised for the absence of Mr. Hill, M.H.R., and Senator Sir Victor Wilson. He congratulated the Ardmona directors, the State Government, and the Water Supply Commission, on the enterprise displayed. During recent years the Federal Government had paid out £750,000 to assist the fruit industry. £50,000 was being spent on a publicity campaign in England to assist the sale of Australian products. With regard to research, £100,000 had been set aside to re-organise the Institute of Science and Industry.

The toast of "The Press" was well received, the response being made by Mr. R. E. Boardman.

During the afternoon visitors were driven around the fertile Ardmona district—intersected by irrigation channels—where the excellent crops of Peaches, Grapes, etc., were noted.

It was pleasing to note that not only were the fruit trees healthy and bearing well, but homesteads had been improved by the planting of palms, shrubs and ornamental trees.

## OHANEZ GRAPES FOR LONDON.

### Experimental Shipment from Victoria.

The Minister of Agriculture and Markets (Col. M. W. J. Bouchier), states that if Almeria, in Spain, can ship several million barrels of Ohanez Grapes a year to Great Britain, and other parts of the world, Australia should be able to do likewise. We have on the Murray, states the Minister, a climate similar to Southern Spain, and it has been proved that we can grow the Ohanez Grape to perfection. We have the additional advantage of six months difference in season from those of Europe, Asia and North America. This protects us from competition and enables us to land our grapes in Great Britain in Spring and early Summer.

Shipments on a commercial scale, said Col. Bouchier, have met with varying success in the past—some have arrived in excellent condition, whilst others have been unsatisfactory. Hopes were raised by a satisfactory shipment in 1914. The war, however, stopped operations, which were not resumed on a commercial scale until 1923. In that year, some 600 cases shipped from Victoria, carried well, selling in London for an

average price of 21/3 per case of 25 lbs. of Grapes.

The following season was a very wet one, and the results were disastrous. Moulds were very prevalent, so much so, that the 1925 shipments, which were again unsatisfactory, seem to have suffered from the abnormal rainfall of the previous year. Growers of Ohanez are much discouraged, and talk of grafting these vines over to other sorts. There yet are points to be learnt in connection with growing and packing, stated the Minister, and it is with this object that the Department is making a small trial shipment per s.s. "Moreton Bay," due to sail on April 14.

The Spanish-grown Ohanez, imported by the Department early this year, again demonstrated the carrying quality of the Grapes from Spain—points have been learnt, and these are about to be put into practice. The Spanish Grapes are packed in barrels. The high cost of cooping precludes our using this form of package, but a case more nearly approximating to the barrel, in which the Grapes will bulk better, and be less subject to rough handling, will be tried—like-wise special treatment of the cork "filler" and of the Grapes.

The condition in which the different packages reach London will be reported on in detail, and a record kept of the prices realised. It is confidently hoped that the information gained will prove of material use, and lead to the elimination of some of the causes responsible for past failures.

In conclusion, the Minister stated with a certainty of the Grapes opening up in good order at the other end, confidence in this promising young industry should be restored.

## FRUIT FOR QUEENSLAND MUST BE GRADED.

The Superintendent of Horticulture (Mr. J. M. Ward), is in receipt of a communication from the Department of Agriculture, Queensland, drawing attention to the fact that a quantity of Apples and Pears is arriving in Queensland from Victoria, and the cases containing these fruits are not marked in any way whatever.

The Queensland grade standards: "Special," "Standard," and "Plain" for Apples and Pears were gazetted on January 23 last. These are practically the same as the Victorian standards which have been in force since April 1, 1925.

Shippers of fruit to Queensland should make themselves familiar with these standards, and grade their fruit according to requirements, otherwise they may be put to considerable expense on the arrival of their fruit in Queensland.

## FRUITGROWERS' CONVENTION.

### Big Gathering Expected at Portland. Bright Programme Arranged.

The Annual Convention of the Victorian Fruitgrowers' Central Association will be held at Portland during May. The date has not been fixed, but it is possible the opening day will be Tuesday, May 18, and that the function will extend over the next three days.

An endeavor is being made to so group the items for discussion that they may be referred to committees in order to save the time of the conference and allow time for educational papers to be read and demonstrations to be given.

It is also proposed to hold a concert and to give two evenings to social entertainment—one night to be devoted to a concert by the delegates, and the other a social and dance by the local committee. Time is also to be allowed for inspecting the excellent orchards in the Portland and Gorae districts. If possible, a cricket match will be played. Committees to deal with these various activities are being formed.

Portland is a seaport with great historic interest, and big possibilities for development. To reach the town one passes through the wonderfully rich and fertile Western District of Victoria. For those who desire to go further, Mt. Gambier, with its wonderful blue lakes, is within easy distance.

A ladies' committee is being formed locally to entertain the visiting lady folk who will be attending the mentioned functions. The programme is at present in course of preparation, and any suggestions would be welcomed by the Secretary, Mr. R. E. Boardman, 9 Queen Street, Melbourne.

## ORCHARD NOTES.

(By E. E. Pescott, F.L.S., Pomologist.)

As soon as the fruit is off the trees, the land should be well ploughed and left in a rough condition until the spring ploughing. If not already done, and the orchard conditions demand it, there is still time to put in a leguminous crop for green manuring purposes. But this should be done as early as possible, so as to give the crop a chance to make some good early growth. Soils deficient in lime or in organic matter are always benefited by a crop of green manures. Where stable manure is unobtainable, the green manure crop is the only means of adding organic matter to the soil.

### Pests and Diseases.

All second-hand and old cases should be thoroughly overhauled. It

is preferable to do this work now, instead of leaving it till spring, when the rush of other duties will certainly prevent it being carried out. The cases, if not bad enough to be destroyed by fire, should be dipped for some time in boiling water. And this is not only for the killing of the codlin larvae, but also to destroy larvae or eggs of any scale or aphid, and also any spores of fungus diseases that may have found lodgment therein.

As soon as the trees have shed their foliage they may be sprayed with lime sulphur spray for woolly aphis, Peach aphis, and the bryobia mite. And this should be done before pruning, so that in handling and carrying the prunings the pests will not be spread about the orchard to infect the clean portions.—"Journal of Agriculture."

## VICTORIA FRUIT CROP REPORT.

### Deciduous Fruit.

In a recent report, Mr. J. M. Ward, Superintendent of Horticulture, states:—The continued dry, warm weather, coupled with high winds, has brought a good deal of the fruit down. Some districts have suffered much more than others. Bush fires in certain fruitgrowing districts undoubtedly contributed to the loss. Despite these losses the season's crop will be fair to medium, as the losses in fruit are not general, and the early maturing fruits were heavy and mostly of good quality.

Peach growers have had a good season, the crops being heavy and the prices high. Cannerymen have difficulty in filling their orders because it is said large quantities of Peaches have been diverted to the fresh-fruit market, attracted by the high prices. Unfortunately the storage dams in the Doncaster district were emptied before the late dessert Peaches matured, and consequently the size and quality of these Peaches were not up to the usual standard.

Despite the unfavorable conditions, it is remarkable that there is a fair percentage of the late Apples and Pears which are little below normal in size. Where careful pruning and thinning of fruit have been neglected, the fruit is generally small, except in specially favored localities and where water for irrigation has been plentiful.

### Viticulture.

February was notable for dryness and heat. In the irrigated areas, the vines look very well. Sultanias bear

on the whole a lighter crop than last season. The effect of heavy production during previous seasons, in reducing the present yield, has been referred to in previous reports. Currants bear a heavy crop of very fine well-colored fruit; the proportion of "Bucks" being noticeably less than in previous years. Gordos are bearing well, though in some cases the bunches are rather "straggly." Walthams have a good crop, whilst Doradillos are rather on the light side, especially where mildew damaged the foliage late last season.

With the exception of oidium, which is distinctly evident in many blocks, disease is remarkable for its absence. Ohanez, and to a lesser extent Gordos and other table Grapes, have suffered somewhat from "Wind Burn." The queer depressions caused on some berries have been mistaken for manifestations of disease and the plant pathologist has received many such specimens from different parts of the State.

The "cold-dip" is being extensively practised. The drying season is an ideal one, so far.

In the un-irrigated vineyards, the scanty rainfall has been severely felt, the berries being small and foliage beginning to suffer. The condition of the vines depends on the tillage they have received. On the best-worked vineyards dry conditions have been less severely felt than might be expected. The shortage will probably reach over 30 per cent.—high-gravity musts will be the rule.

### Citrus.

The citrus crop is maturing well. In the various citrus areas, scurfing of the rind of Lemons, Oranges and Mandarins is very prevalent this season. Investigations by the plant pathologist have shown that these markings are undoubtedly due to thrips.

The experimental plot at Shepparton, where a number of trees have been treated with various liquid insecticides and powders blown on the trees, shows much less marking than untreated trees. It is yet too early to pass an opinion on the experiments now being conducted, but from present indications the insecticides applied appear to be fairly successful.

Growers are much concerned in the irrigation areas because of the water shortage. Water storages are rapidly becoming depleted, and the weather continues dry.

Later.—Since the foregoing was written, glorious rains have fallen.

## State Fruit Advisory Board.

### No Election for "Fresh Fruits" Section.

#### Growers are Disappointed.

THERE is a feeling of genuine regret that in reconstituting the State Fruit Advisory Board, the Department of Agriculture failed to give the growers an opportunity of electing their delegates in the Apple and Pear section.

The pity of it is, that the section concerned represents practically half of the area under fruit (excluding vines), in Victoria. By refusing the growers a vote the Minister has pleased nobody and has placed the members appointed in an invidious position.

The following appears in "Hansard," p. 3648:—

Col. Bourchier (Minister for Agriculture):—It was put to me by deputation, that the State Fruit Advisory Board was in some respects not representative. I pointed out to them that in the new year I shall be glad to arrange for the growers of the State to elect their own representatives to the Advisory Board.

Mr. Everard:—I am glad to hear of that promise from the Minister.

A circular was sent from the Department, on January 28, requesting growers to nominate two representatives for the Advisory Board by February 22.

A representative Conference, called by the Central Association, was held on February 18, when growers pointed out—(1) that the present time was most inopportune for an election; (2) that the proposed method in writing to individual associations, instead of the Central Association, was not democratic, as an association of 300 members had only one vote, the same as an association with 30 members; (3) that the present representatives on the Advisory Board should carry on until May, when the delegates could be elected in open conference.

The Superintendent of Horticulture, Mr. Ward, explained to the meeting the method of the proposed election, namely, that on receipt of the nominations, voting papers would be sent to various societies concerned.

These voting papers were not sent.

There is a sincere conviction that the whole procedure would have been simplified had the Minister not chosen the busy picking season for calling for nominations, and had fulfilled the request for the election in May, at the growers' conference.



The charge was made in a section of the press, that growers had shown apathy in that only 12 associations out of 28 sent in nomination papers. It is doubtful, however, if as many as 28 associations had a right to nominate or vote in this section. Apathy is not admitted by the associations concerned. In the first place the time was most inopportune, especially as growers had the added duty of wiping Apples for export, and the method of "election" was entirely new and unfamiliar. It is unusual for meetings to be held at this time of the year. Further, the Department's circular stated that two should be nominated, whereas three were finally appointed, without notifying the growers of the intended extra appointment. In a letter to the Central Association, the Minister for Agriculture states that he extended the time for nominations from February 22 to March 12, but the associations were not notified to this effect.

The members of one association were busy fighting the bush fires, and were thus disfranchised. Other associations not desiring to nominate their own members, but keenly desirous of voting on the nominees, were disfranchised, despite the definite promise by the Minister. The position is a regrettable one, the more so as it could have been easily avoided.

The Department of Agriculture is performing fine service for the industry in many ways, and this is sincerely appreciated by every thinking grower; but just why the Department should refuse to give the men concerned a vote in the appointment of their representatives, must always remain a mystery.

#### STATE FRUIT ADVISORY BOARD.

A meeting of the newly-appointed State Fruit Advisory Board was held on March 23, Mr. J. M. Ward presiding. There were also present, Messrs. S. Brentnall, J. W. Aspinall, J. H. Lang, J. B. Mills, W. F. Cooper, J. A. Rushton, H. M. Wade, R. A. Routley, Thompson (Merbein), also Mr. Thompson, representing the Customs Department.

**Fresh Fruit Section.**—Mr. Aspinall protested against the method adopted in appointing the members of the fresh fruit section, with an election, and asked that the appointments be cancelled.—Supported by Mr. Lang.

**Fruit Marketing Organisation.**—A report was received from Mr. B. S. B. Cook, giving interesting details. Members requested added information re quantities handled and the cost per case.

Mr. Cooper was elected as a member of the Marketing Committee in place of Mr. W. J. Foster.

**Prune Crops.**—The Chairman stated, owing to large plantings, particularly in New South Wales, a problem was arising with regard to the marketing of Prunes. A letter was received from Mr. F. L. McDougall, Secretary of the London Agency of the Commonwealth Dried Fruits Control Board, stating that owing to the enormous production of Prunes in California, and to the tendency of United States to dump surplus production on foreign markets, and also owing to the cheap production of Prunes in the Balkans, the outlook for a favorable market in the United Kingdom for Australian Prunes was not very bright.

**Apples Sprayed With Lead Arsenate.**—Mr. Mills stated that Apples which had been declared by analysts to be within the British Government standard had been prevented from being exported. Exports of such Apples had been going on for 20 years. If wiping were to be compulsory, Victorian export would largely cease. There should be uniformity between the Government and private analytical tests. It was not commercially practicable to wipe Apples before shipment. The insurance rate to cover rejections in England had been reduced from 30/- per cent. to 2/6 per cent.

Mr. Lang stated that the arsenic scare might become responsible for shifting the centre of the Apple trade from London to Germany.

Mr. Brentnall said he considered that the reasons for restrictions seemed purely academic.

Mr. Thompson, of the Customs Department, said the restrictions were imposed because of the British Government regulations, and he hoped that the trouble would soon blow over, in which case the Customs Department would be glad to remove the present restrictions.

**Apples for Hawaii.**—The Chairman stated that there was a population of 80,000 in Honolulu, and a market for Australian Apples there would be worth developing. There was a possibility of sending 1000 cases every two or three weeks. It was decided to have enquiries made regarding shipping facilities, etc.

The recent competition for the best kept orchard in the Pakenham district created much favorable interest in that district.

#### PERSONAL.

Lt.-Col. W. E. James, D.S.O and bar, who has completed 20 years' service as an officer in the Citizen Forces, has been awarded the Colonial Forces Officers' decoration.

Lt.-Col. James was recently president of the Victorian Fruitgrowers' Central Association, and for several years much esteemed as a member of the executive.

\* \* \*

Our Sydney office had a call during the month from Mr. T. M. Brown, orchardist, of Carlingford, which is about 20 miles outside Sydney. Mr. Brown mentioned having a very good season just closed. He produces a very high-grade Peach, and also grows some very fine Japanese Plums, which have a ready market.

#### POWER OF ADVERTISING.

Figures issued by the Fruit Trades Federation, concerning the average consumption of fruit per head in the United Kingdom and Ireland last year, show that the total expenditure by the general public on advertised fruit was nearly £1,000,000 more than in the previous year, and over £2,000,000 more than in 1923.

"The total advertising expenditure to date for the two years has been just under £100,000, the total increased return just over £2,000,000."

#### INTERSTATE FRUIT TRADE.

##### New Cases Must be Used in Shipping to Tasmania.

The Director of Agriculture (Dr. S. S. Cameron) is in receipt of a communication from the Department of Agriculture, Tasmania, drawing attention to the fact that fruit from Victoria is arriving in Tasmania in secondhand cases.

Shippers of fruit to Tasmania are reminded that this practice is a contravention of the Tasmanian regulations which require that fruit forwarded to that State must be packed in new cases.

The Victorian Department of Agriculture does not inspect fruit for export from Victoria to other States, and fruit forwarded to Tasmania is examined at the port of entry. Shippers failing to comply with the requirement of the Tasmanian regulations are liable to have their fruit rejected on arrival in Tasmania.

# New South Wales.

Orchard Notes for April.

Items of Interest.

(By Our Correspondent.)

## MURRUMBIDGEE IRRIGATION AREAS.

LEETON (18/3/26).

**Cannery Operations.**—The cannery is now processing the pullar cling. Owing to the large quantity of this variety on the areas, it is now a very busy time for the grower, and also for the cannery. This Peach may well be claimed as the big thing in canning, and more of them will be planted out. The Pullar is likely to maintain its lead above all other clings.

Many of the intermediate clings (arriving between the Apricots and the Pullar), have proved unsatisfactory, and like the Elberta, are being rooted up.

These fruit experiments on the areas have proven themselves naturally as very costly to the grower, but regard for the necessities of the cannery, and also marketing requirements are the two things that growers must largely concentrate themselves on. We are gradually, through these experiments—getting nearer to these two goals. In order that the grower can get into a proper grip of such essentials, it is imperative for one thing that the Fruitgrowers' Associations establish a methodical statistical department in order to get at some finality in the direction of selection of suitable varieties, and marketing requirements.

**The Elberta Difficulty.**—Whilst the Irrigation Commission has apparently decided not to grant compensation (under the peculiar circumstances, to growers), it is felt that the Commission is paying regard to the past strictures of the Auditor General, and that it will not force opposition when this question comes up before the settlers tribunal. Sympathy for the settler has not been demonstrated as a matter for special consideration by the Auditor General. Possibly such a thing does not come within the ambit of his duties.

**Second-hand Cases.**—The fruit-growers are urging the Commission to abandon the practice of allowing these to come on the area, and asking for the closest inspection of lug boxes to and from the Leeton cannery. If fruit diseases are to be grappled with, every precaution, it is agreed, must be taken advantage of. In the light of experience there can be

little doubt that the codlin moth, so prevalent with us now in the Apple and Pear, receives a portion of its introduction through the second-hand cases. In justice to the cannery, it can be said that it is exercising care in the sterilising of lug boxes.

**The Settlers' Tribunal.**—The selection of growers' representatives on the Board is causing some interest. In the horticultural section there are three candidates (one to be elected). The agriculturists are not, so far, showing the same activity as the fruitgrowers in regard to representation. There can be little doubt that the result of the tribunal's efforts will ease the settlers' burdens.

## Orchard Notes for April.

(W. J. Allen and H. Broadfoot.)

**WITH** later varieties of Apples and Pears, harvesting is still in progress. To secure the best results, fruit should be carefully picked, handled, and packed. It is important to place upon the market only such fruit as is in prime condition, and of attractive appearance. The buyer is usually very critical. He sees a great range of fruit, and he knows that he who places the best before the consumer—best in quality and in appearance—has an immense advantage over vendors who are careless in such matters. In this connection it may be remarked that wrapping fruit helps to preserve it, and enhances its aspect. A clean case, with well-graded, well-packed fruit, with an attractive label, makes a strong appeal to the most fastidious buyers. Some carters injure the appearance of cases by walking over them, and it is sometimes further detracted from by the cases being packed in dirty unswept trucks.

Wiring of cases is strongly recommended, particularly when they are made of soft wood and intended for export. The best results are obtained by placing the wires about 1½ inches from each end. Wires so placed will greatly minimise the loss by pillage and damage.

### Clearing.

In some cases growers or prospective growers will be clearing land for future use. If the work is done by contract there are important points to be included in the agreement. Among the necessary stipulations (after

agreement as to the price to be paid per acre), are:—That the work is to be completed within a specified time. That all stumps be removed to a specified depth. That all stumps and trees that stand on the boundary of the area to be cleared be treated as though within the area. That timber, logs, stumps, etc., be not rolled over the boundary line. That all stump holes be filled in level to the general surface. That all timber, except that agreed upon as being useful for fencing and other purposes, be burnt. The contractor to follow the plough, and to remove all roots, etc., which obstruct the plough. Progress payments up to 75 per cent. of the work done to be paid to the clearing contractor; the balance on completion.

Before fencing it is advisable to fell any trees that lean over the line to be fenced. If a contract is let for fencing, specification should be clearly drawn out, stipulating the size of the posts, depth of postholes, number of wires, gauge of wire, distance posts are to be apart, distance apart of strainers, diameter of corner and gate posts, length of posts, kind of timber to be used, and so on.

### Planting.

Citrus trees may be planted during the present month, provided the soil is in good condition and the locality is not subject to severe autumnal frosts. Care should be taken that roots are not exposed to the sun or wind. Too much care cannot be taken in the selection of trees. Only vigorous young trees should be selected, all others should be unhesitatingly rejected.

### Pests.

Growers should persevere with stringent measures to fight the codlin moth—so as to get as near as possible to complete extirpation of a destroyer that exacts heavy toll if not kept in check.

As soon as the crop is removed, it is advisable to give the trees a spraying with a nicotine extract for aphids. Plenty of force is required to break up the aphid clusters and dislodge them. That mentioned is a contact spray and must hit the insects to achieve a kill.

The Apple leaf jassid has been prevalent in some of the chief Apple-growing districts. Jassids, or "frog hoppers" as they are called, suck the sap of leaves, causing them, when the infestation is bad to shrivel. Injury to the leaf means injury to the tree and to its product. It is in the leaf that raw food material is elaborated into organised food material, and injury to an organ whose function is so important must result in loss of vitality to the tree. Another disability is that fruit is blackened



by the exudations and excrement of the jassids, a discoloration which lessens, of course, its commercial value. In order to control the jassid pest, clean cultivation is essential. Affected trees should be sprayed in early summer with a nicotine extract. This will destroy the first brood before it has time to develop.

### Re-soiling.

The re-soiling of Citrus trees is greatly to be recommended. It is conducive to health, vitality, productivity, and quality, and nothing but good can come of it if judiciously carried out.—"N.S.W. Agricultural Gazette."

## South Australia.

### Orchard Notes for Southern Districts.

(By C. H. Beaumont, Orchard Instructor.)

This month will probably see the last of fruit harvesting. It is a mistake to allow fruit to hang on the tree after it is mature, the quality is affected very materially. It is much better to store it.

Windfalls should be cleaned up and removed or buried deeply; experiments have proved that fungous diseases are lessened by this procedure.

Apricot and Peach trees may be pruned. It is essential that all dead wood should be cut clean out. The loss of big limbs shows a root trouble, probably caused by the tight packing of the soil; this may be remedied by the use of the subsoil plough or by explosives.

Have ground in readiness for planting; the land will, of course, be subsoiled, the deeper the better. Open up the holes and leave them open with the stake in position. Get the trees from the nursery as soon as they can be safely lifted. To get good trees it is necessary to use good wood and stocks from known heavy bearing, good quality trees. It will pay you to wait another year rather than use poor trees.

Clear away all fruit cases not wanted, and all spare timber; scald it all before packing it away. Trays finished with, should also be scalded and packed.

Spray with fungicide all trees which have suffered severely.

See that ploughs and cultivators are in good order and ready for use.

If you intend to grow a cover crop, it should be in as early as possible. The fertility of the soil depends on its humus contents. Work up the headlands, do not fill them with cuttings and rubbish.

Young Citrus trees will need some protection from the frost. This can be done to some extent by making a shield of a chaff bag or hessian stretched between two stakes, so as to shade the tree from the rising sun. South Aus. "Journal of Agriculture."

### Fruit Crop Notes, Compiled in Mid-March.

The continued dry weather has seriously affected fruit trees and vines in various parts of the State (writes Mr. Geo. Quinn, South Australian Government Horticultural Instructor).

This remark has a more direct application to those plantations wherein good tillage has not been carried out. In soils which are capable of holding moisture and where the tillage has been satisfactory, it is really remarkable how well these plants have stood through a period of about six months without sufficient rain to wet even the cultivated soil, six inches in depth.

Most stone fruits have now been harvested, and only a few late Peaches remain to be gathered. Apples and Pears are being harvested and packed for export. The Apples are in many places on the small side, but they are very free from black spot and bitter pit, but the codlin moth caterpillars are taking much toll, which the packers indicate by the larger than usual number of rejects.

A great many Apples have fallen from the trees, more particularly when the trees are set in the non-moisture retentive soils. The yield of Apples, as far as numbers go, is a good one.

The principal trouble of the Apple grower this season has been caused by the "arsenic scare," and most of the packing sheds are wiping the spray stains away as far as practicable. This increases the cost of packing considerably, and it is hoped will allay the scare. Analyses of sprayed and dusted Apples here do not reveal the presence of arsenic in quantities sufficient to warrant the exclusion of the fruit under British standards of freedom from contamination.

It is possible, however, that the uncertainty of how their Apples will fare if shipped to Britain will cause many growers to hold back for local use a good many more cases than they otherwise would have done.

The Grape harvest is in full swing in most districts. The wineries are busy receiving fruit in the non-irrigated areas and the shrinkage of

Glenorie.—Mr. F. A. Nicolson, of "Pineville," Glenorie, N.S.W., writes as follows, under date March 8:—"We are having a very dry time in Cumberland, and the older Citrus blocks are in a bad way. The young trees up to six years old look very well. The crop all round is light to medium."

weight will probably reach 30 to 100 per cent. of what the vines promised at an earlier stage in the growth of the crop.

In the irrigated areas the drying of Currants, Sultanas, Pears, and Figs is still in progress.

Here the vines have not felt the dry summer, but the crops are not—with the exception of Currants—very heavy. The Currants have grown into well-shaped bunches of evenly-sized berries, with a noticeable absence of seedy berries (bucks). The splendid drying weather has produced a magnificent sample of dark Currant, carrying a rich blue bloom.

The Sultana crop is patchy, but mostly on the light side. Very few berries are burnt on the bunches, and the advocates of the cold potash dip will have an opportunity this season of demonstrating what can be done in the direction of producing a light golden fruit.

Many of the Muscats and Currants, both in the coastal and inland areas will go to the distilleries straight from the vines, thus relieving the dried fruit situation considerably. The Doradillos are fair to good in so far as crop is concerned, and again demonstrate that this vine needs not only a deep soil, but great abundance of water to enable it to succeed.

Amongst Citrus fruits, Navel Oranges are only promising to give a fair crop. Seed bearing or ordinary Oranges are a little better. Lemons are promising for a good average yield, and Mandarins, though only grown in small numbers, are not likely to give much crop.

The Citrus trees are mostly grown under irrigation in this State, and, as a consequence, have not severely suffered from the long dry summer.

In the irrigation areas, Smyrna Figs are now being grown in small quantities on many blocks. The mature trees are showing splendid crops of good quality fruit, and the good drying weather is permitting an evenly-coloured sample to be produced.

[Memo.—Since the foregoing was written, generous rains have fallen.]

# Co-Operative Marketing of Farm Products.

## Limitations of Governmental Activity.

Agricultural Co-operation is Extension of Principle of Mutual Helpfulness and an Economic Expression of Group Life in Farming as well as a Natural Development of Business Agriculture. Chief Aim is to Contribute to and Effect Better Merchandising Methods, Not to Obtain the Profits of Independent Merchants.

By Wm. M. Jardine, Secretary of Agriculture (Official Report to Congress), U.S.A.

[The following article appeared in "Citrus Leaves," the official organ of the Mutual Orange Distributors, a growers' co-operative company, which exists side by side with the Californian Fruitgrowers (Citrus Exchange). An editorial note in "Citrus Leaves," in introducing the article, is as follows:—The report of Secretary Jardine is an epoch-making document, as he is the first Secretary of Agriculture to take such a decided official step in favor of co-operative marketing. Among the leading co-operative marketing groups of the United States is the Mutual Orange Distributors, which has served the Citrus growers of California since 1906.]

**T**HE MOST DISTINCT and significant movement in American agriculture in this decade is the almost universal trend toward co-operation in the marketing and distribution of farm products. It is in no sense a regional or sectional movement, for it exists in all sections, and is participated in to some extent by producers of practically all kinds of farm products.

There has been some co-operation by farmers in the United States for many years, but within the last two decades, and particularly during the last decade, the movement has assumed proportions which indicate that it is a response to a fundamental and universal need of present-day agriculture.

It is highly significant from all points of view that the best minds in agriculture, without regard to region or commodity, are unanimous in the opinion that group action in marketing must be added to individual efficiency in production if the high standards of American farm life are to be preserved and agriculture is to maintain its proper place in our national life.

Vast problems are involved in the changes in agriculture, and in commerce and industry which this movement is bringing about. They are broader than any one class, and vitally affect all classes, hence they are a proper concern of the Government.

### Co-operative Marketing not a Class Movement.

It is the traditional policy of our Government to foster agriculture as the most essential of our industries, but without in any way seeking to dominate or direct it.

Although co-operative marketing is a farmers' movement, it is not in any proper sense a selfish class movement, and holds no menace either to consumers or other business interests. Agricultural production is essential to national welfare, and the only guarantee of an adequate and dependable supply of agricultural products is a prosperous and contented agricultural population. It is obvious to any thoughtful mind that this happy result cannot be obtained by agriculture unless it avails itself of the efficiencies and economies of organization and specialization which characterize other industries in this day. Consideration alike of intelligent self-interest and public welfare must prompt other classes to support wise and intelligent efforts of farmers to place their important industry upon a basis of stability and prosperity.

### Based on Mutual Effort.

Agricultural co-operation, as we understand it at the present time, is simply an extension of the principle of

mutual helpfulness that exists between many groups engaged in industry, commerce, or agriculture. It is, however, a very definite extension of that principle. In a co-operative marketing organization, the members do not contribute their services in the informal way in which one farmer may help another in harvesting or threshing. They take another step and contribute capital to finance a joint business enterprise, and enter into agreements which specify the duties of each member. When this occurs, co-operation takes on a more or less definite legal status, and meets problems similar to those of other business organizations because they deal not only with marketing but with the farmers' production practices, as these practices affect marketing.

### Orderly Production and Co-operative Marketing go Together.

Business agriculture to-day demands that we bring about a better balance between production and distribution. American farmers can more effectively apply modern business methods to their business and effect integration in the production and distribution of agricultural products by banding themselves together in co-operative groups. In other words, I believe co-operative marketing to-day is an economic expression of group life in farming and is a natural development of business agriculture.

### Need Intelligent Marketing.

To place our agricultural production on a stable and profitable basis we must recognize the inseparable relation between production and marketing. The working out of a more efficient marketing system must go hand in hand with an intelligent adjustment of production to market demand in a more orderly manner, so as to avoid periods of over-production with great loss and periods of under-production with prices unsatisfactory to the consuming public. That agricultural production may more readily become responsive to the market demands, the farmers will have to organize for marketing through the development of sound farmer-owned and controlled co-operative associations.

### Co-operation is Business.

I view co-operation in agriculture as a business agency serving the producers both as an intelligent guide in their production programme and an effective instrument for merchandising farm products. Instead of thinking of co-operation among farmers as a producing proposition, we need to think of co-operation as a business form of organization that penetrates our whole agricultural industry. By this I mean co-operation in an educational way, must reach back to production practices and forward through efficient business organization to marketing practices. It is from this concept that I look upon co-operation as a "business form of organization," adapted to the farming industry.

### Better Merchandising is Purpose of Co-operatives.

The chief aim of co-operative marketing is not to obtain for the producers the profits of independent merchants, but rather to contribute to and effect better merchandising methods than previously were employed in marketing farm commodities. Proper grading of farm



products and standardisation of grade and pack, which are essential to efficient merchandising, can be effected much more readily when farmers are organised into groups. Standardised grades facilitate trading, create confidence, and stabilise market conditions. These fundamental marketing functions, properly performed by producers, through co-operative action near the point of production, make it possible to reduce the cost of getting these commodities to market, and are also a means of an intelligent use of supply, which will aid in stabilising markets, avoiding gluts and reducing wastes.

#### Movement in Infancy.

The business transacted by co-operative buying and selling organisations will be, conservatively estimated, £500,000,000 during 1925—approximately one-fifth of the total agricultural business. A movement of this magnitude, with its tremendous economic and social significance, must be analysed and guided so that its highest possibilities may be realised. Co-operation, although firmly established, is in its infancy in this country, as compared with other economic and social institutions. This is another reason for analysing and studying the co-operative methods and experiences accumulated to date. Actual experiences need to be collected and expressed in plain language in order that they may serve as guide-posts for the future. This the Department of Agriculture has been doing since 1913, when it began some fundamental research in co-operative marketing.

The Department's work to date indicates that during the past ten years co-operation has been evolving from the local type of organisation into associations and federations covering large areas and handling business totalling millions of dollars annually. Although 95 per cent. of the co-operative associations are still local organisations, approximately one-third of the total business at the present time is carried on by 100 of the federations and regional organisations. They, from a business point of view, are the dominant factors in co-operative marketing.

The tendency towards combinations in the business world has had an influence on the creation of large co-operative marketing organisations. The average business of co-operative associations more than doubled between 1913 and 1922, increasing, for the organisations of which the Department has record, from £20,000, in round numbers, to £43,200, per association. The business of tobacco marketing associations increased from an average of £28,400 in 1913, to £1,521,225 in 1922; cotton associations, from £38,222 to £681,153; dairy marketing associations, from £10,060 to £33,336; and fruit and vegetable organisations, from £30,667 to £56,816. These figures do not take into account the business done by the federations, of which many fruit and vegetable and dairy organisations are members.

This increase in volume of business has resulted in progress in methods of operation and merchandising. It has brought about, on the whole, economies in operation, a greater insistence on standardised products, easier financing, and has encouraged capable executives to enter the service of co-operative associations.

#### Education Needed in Co-operative Marketing.

Another important problem of co-operation is the development of a co-operative spirit or understanding throughout the rural communities. It will be of little value to set up large and efficient co-operative business organisations if they are not understood and supported by those whom they seek to benefit.

It is universally recognised that the future of co-operation depends upon the knowledge, which the individual producer has of its possibilities and limitations. He must take a long-time view of the movement. The

producer must learn to test his association, not by the price advantage it may offer him this year, but by the services through which it may contribute to the stabilisation of production and distribution. Our agricultural colleges and other State and Federal institutions must broaden their curricula to include co-operative education—a form of education that will aid the members, officers, directors, and officials of a more thorough understanding of the function and meaning of co-operation.

There is also a real need for a better understanding and appreciation of the co-operative movement by the general public. Farmers' co-operatives must find and fill their place in the agricultural, commercial and industrial life of the nation. To this end each interest must be brought to know, understand, and co-operate with the others.

#### What Should be the Government's Relation.

The relationship of the Government to co-operative associations may be loose and informal or close and authoritative. It may range all the way from a mere let-alone policy to one of thorough-going supervision and minute regulation. Neither extreme, of course, is within the range of practical policy. The Government is already performing services for co-operation that put the let-alone policy out of consideration.

On the other hand, it is not proposed in any responsible quarter that the co-operative movement should be hampered by Government regulations. Co-operation in the United States has developed from the needs and experiences of the farm people. The weight of experience in this country shows that it should begin as an economic movement of the rural communities, and that it should be free to develop in accordance with their needs and the opportunities for service.

The experience in European countries also points to this fact. It is improbable that the Danish Government, for example, at any time during the history of the co-operative movement in that country could have developed a plan of co-operation as admirably adapted to the needs of the Danish farmers as is the present system. Neither is it likely that the Danish Government, by decrees or regulations could have made co-operation the important part of the national life that it has come to be through spontaneous, untrammelled growth.

#### Supervision and Control not Desirable.

It seems obvious that supervision and control are not desirable. Co-operative associations are business concerns. Like other business concerns they must eventually stand or fall by themselves. They cannot fairly be asked to accept a degree of regulation and control from which private distributing agencies are exempt.

Removing responsibility for their actions from the co-operative associations themselves to the Government might be fatal to their efficiency. It would certainly not encourage men of executive ability to seek managerial positions in the movement. Efforts to regulate co-operation minutely by law or by administrative edict cripple the initiative of the co-operative associations and force them into a rigid mold when their greatest need is flexibility. Excessive regulation might smother the movement.

What the Department is already doing indicates the nature of the service it can give to co-operation. It is studying marketing problems and making surveys indicating what are the prospects of various co-operative projects. It is examining the causes of success and failure in co-operation, and giving counsel to association boards of directors and managers. It is helping by counsel and advice groups of farmers to develop effective organisations and to plan wise merchandising policies. It is popularising the use of uniform and up-to-date accounting

systems and office records among co-operative associations. It is analysing marketing operations to reveal their strong and weak spots, and assisting associations in developing their own methods of market analysis. It is aiding co-operatives to extend their markets at home and abroad. It is acquainting American co-operators with the experience of co-operators in other countries. It is furnishing market news services, and establishing commodity grades and standards to facilitate trading. It is helping producers to correlate their production plans, so that the hills and valleys of production can be levelled out to some extent.

#### Department Ready to Expand Services.

What the Government can do further to assist the co-operative movement depends upon the funds available for such work, and the demands of the co-operative associations. The Department stands ready to extend its services to the full extent of its present facilities, and to recommend such enlargements of its research work and services as shall appear advisable after consultation with the co-operative organisations and a careful survey of their needs. The direction which further services should take can best be indicated by considering the problems confronting co-operative associations at the present time.

The personnel of the Bureau of Agricultural Economics is studying the problem of marketing and distributing farm products. To put the information in a form in which it will be immediately available and useful to the co-operative organisations requires a type of extension workers which the Bureau does not have at the present time.

One possible means of further service to the co-operatives, therefore, is the employment of commodity specialists, who would be familiar with the needs of the co-operative organisations on the one hand, and with the research and service work of the department on the other hand. These men would form a contact between the associations and the Department, and would disseminate

current crop and market information, and information regarding price trends, conditions of supply and demand, and other useful information. At the same time they would be instrumental in guiding the research work of the Department toward a closer study of the special problems of co-operative associations.

The business organisation and management of co-operative associations will always be of paramount importance. The business analysis studies that have been begun could be profitably extended. This is in line with the practice of large corporations which are devoting considerable sums to research in the fundamental problems of merchandising, production, financing and management. If the co-operative associations are to reach the same plane of efficiency as private organisations, it is desirable that they have the advantage of similar studies. The Department cannot undertake to do this work for the co-operatives, but it can, very properly outline the field and develop methods in this important and difficult undertaking.

A third problem, not the least important, is the dissemination of knowledge to farmers regarding the principles and aims of co-operation. The Department can make an important contribution in this field. The employment of specialists in co-operative education, to work with State agricultural colleges, State Boards of Agriculture, and the co-operative associations in promoting the knowledge of co-operative principles and practices, should be helpful in developing a sound point of view toward the movement.

I have indicated only some of the larger problems in which the Department can properly render assistance. There are others of almost equal importance, and still others will arise as co-operation advances. It is hoped that the Department's services to co-operative associations will establish a closer relationship between the organised farmers and the State and Federal agencies engaged in scientific research in the field of agriculture. The agencies can serve all producers by a special effort to make their services and the results of their research available to the organised groups.

## Western Australia.

### Seasonable Work for April.

(Geo. W. Wickens, Officer in Charge  
Fruit Industry.)

**A** GOODLY number of steamers are calling at the ports for the purpose of loading fruit for England, and the growers of kinds suitable for export have their time fully occupied in picking, grading and packing, both for export and local markets.

#### Cultural Hints.

Apply fertilisers to the orchards during April, and where trees are bearing well, do not be afraid of overdoing it. A reasonable dressing on average orchard soil for trees in full bearing is six cwt. superphosphate, two cwt. muriate of potash per acre, with one and a-half bushels of Peas sown in April and ploughed under in spring.

The land should be thoroughly pre-

pared this month, where new orchards are to be planted. Plough to a depth of 10 inches or 12 inches, and remove all roots of native trees.

Baiting for fruit fly should be continued, and every care taken to destroy all infested fruits.

Spray Orange and Lemon trees towards the end of this month with Bordeaux or Burgundy mixture to control brown rot, using four pounds bluestone, four pounds freshly-burned lime, 50 gallons water; or four pounds bluestone, six pounds washing soda, 50 gallons of water. The ground under the trees should also receive a liberal spraying with Bordeaux or Burgundy. When the disease is scattered throughout the orchard it is not wise to confine the spray to infected trees only; in the case mentioned, all trees should be treated alike. Observations to date tend to show that the trees which have been sprayed to a height of four feet to five feet from the ground, are as free from brown rot as those which have been sprayed all over.—"W.A. Journal of Agriculture."

## AGRICULTURAL CO-OPERATION.

### Business Efficiency is Imperative, Not Governmental Control.

#### Valuable Experience in U.S.A.

A valuable article on agricultural co-operation, written by Mr. W. M. Jardine, Secretary for Agriculture in U.S.A., appears in this issue. Readers are urged to closely study the article. It is a capable review of what has been accomplished, and an intelligent forecast as to the future.

The attitude of the Government is defined—a policy of helpfulness in statistical and research work, but not trespassing on the legitimate business side—which call for capable business men of executive capacity. Supervision and control are deemed inadvisable.

Any temporary success is a permanent loss that is gained by the sacrifice of character.



## New Zealand Apples

English Market Unlimited.

Views of Mr. Attwood.

The immense scope of the English market, so far as Apples from New Zealand are concerned, was the subject of reference recently by Mr. T. W. Attwood, ex-president of the N.Z. Fruitgrowers' Association, who has returned from England. Mr. Att-

viewpoint of the English market. Australia, last season, put 2,000,000 cases of Apples on the English market, while the United States and Canada sent much larger quantities across.

### TOO MANY ORCHARDS.

#### Position in Marlborough.

Years ago when the export of Apples from New Zealand to England first commenced, there was an orgy of orchard planting in certain districts, notably Nelson and portions of Marlborough, and the result has ever since been apparent in over production and the glutting of the local markets. Experienced growers have long contended that in many places it would be more profitable to cut out the orchards and utilise the land for some other kind of farming, but until recently no one had carried the idea to its conclusion and eradicated his orchard.

Quite recently however, a 16½ acre orchard in Marlborough, formerly one of the show places of the district, has been cut down, and the land will be utilised for growing other crops which the owner considers will give a greater profit. The owner of the orchard, Mr. William Blick, cut out practically the whole of his orchard, which consisted of some 2,000 trees, many of which were sixteen years old.

Discussing his reasons for going out of the business in such a manner, Mr. Blick said that Apples did not pay sufficiently to warrant the work of keeping up the orchard. He had come to the conclusion that there were too many orchards and that someone had to get out of the business. As his land would grow anything he decided that he had better cut down his orchard.

Mr. Blick who was one of the leading orchardists in the district and whose fruit had gained numerous prizes at different shows, said that he was sorry to have to admit that he had induced many people to commence orchards. At the time he did so Apples were bringing 6s. a case,

but since then the profits to the growers had been growing smaller and smaller until now he was lucky if he got 3s. a case. Labor difficulties were also great, and high prices had to be paid for skilled men.

A unique feature of the orchard was a tree which in 1921 produced the largest Apple in the world, this turning the scale at 33½ ounces. The tree was a Prince Alfred, and the Apple was only beaten by one grown by the King under glass, which weighed 34 ounces. This tree has been spared

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wood has for the past twelve months represented the fruitgrowers in England, and has supervised the placing of consignments of New Zealand fruit on the English market.

Mr. Attwood said that the total export from New Zealand last season was 250,000 cases, but there was every likelihood that that quantity would be doubled during the coming season. Fruitgrowers in the Dominion were inclined to over-estimate the importance of New Zealand from the

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Best market values and  
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together with a few others which the owner is keeping for his private use.

The destruction of this fine orchard only serves to illustrate the difficulties with which the orchardist has to contend and to show that only when growers work their places in the most scientific manner can they get ahead. The present difficulties in connection with the industry in the Dominion can all be traced to the indiscriminate planting during former years, when much land entirely unsuited for fruit-growing was planted.



GIBBS, BRIGHT & CO.—See Page XII

# Cold Storage In Australasia

## Cool Storage Investigations in New Zealand.

Season 1925.

(By N. McClelland and L. W. Tiller, Cawthron Institute, Nelson, N.Z.)

Since about 1920 apples in cold storage in New Zealand have suffered injury from a physiological or functional disease known as flesh collapse, the cause of which has hitherto not been definitely known.

(19, 20)\* Waters, in 1922 and 1923, suggested that brown heart (9) (a functional disease caused by excess of carbon dioxide in the presence of oxygen, in the store air) and flesh collapse were identical, and made the important observation that overmaturity of the fruit rendered it more susceptible to flesh collapse.

### Flesh Collapse Different from Brown Heart.

In 1923 (14, 15) the writers were able to prove that flesh collapse was not identical with brown heart; at the same time, however, brown heart was artificially produced both in cold storage and in the laboratory by allowing the carbon dioxide evolved from apples to accumulate.† From observations made in a number of stores it was deduced that excessive humidity might be a factor of importance in the development of flesh collapse.

In 1924 (15) it was shown definitely that the combined influence of higher temperature and lower humidity lessened damage from flesh collapse, but it was not possible to associate the disease definitely with either excessive humidity or low temperature.

In both 1923 and 1924, the work was greatly hampered by the lack of any experimental chamber in which standardised conditions could be obtained. Work of this nature requires that the various factors be investigated one by one and this was, of course, not possible in the commercial chambers.

This season (1925), however, owing to the kindness of the directors and managers, it has been possible to construct a small experimental store within a chamber of the Nelson Freezing Company's stores, at Stoke.‡

The experimental store, which held about 50 bushel cases and had floor to ceiling air circulation, was of the

dry battery, forced air circulation type and was independently controlled.

The flesh temperature of the apples was maintained at between 32 degrees and 34 degrees F., and the humidity of the air discharged into the room was about 50 per cent.

In this store flesh collapse was more prevalent than in other stores§ with both a higher temperature and humidity, but less than in another store where the temperature was approximately the same but the humidity high.

It therefore appears that the chief causal agent of flesh collapse is low temperature, but that the trouble is increased by excessive humidity.

### Flesh Collapse and Internal Breakdown Identical.

While it may never be possible to prove the absolute identity of a functional disease in New Zealand with a similar one in England, it is nevertheless almost certain that flesh collapse is identical with the internal breakdown found by Kidd and West|| in experimental storage in England, and known also as internal browning in America (4, 16, 22), and as "scald" in Australia 1, 2).

It is of interest to give here the excellent description, by Kidd and West (10), of internal breakdown; the writers find that this agrees exactly with their observations of flesh collapse.

### Internal Breakdown.

"(1) The disease is a progressive change in the character of the flesh tissues of the apple. The earliest stage in the development of internal breakdown that can be detected, previous to the definite browning of the tissues, is that at which the flesh assumes a slightly abnormal appearance, which precedes any change in tint. This, however, is not conspicuous and would not affect the market value of the fruit."

"(2) In later stages the feature common to all types of internal breakdown is a marked browning of some part or of the whole of the flesh of the Apple."

"(3) The brown tissue may, or may not, extend to the skin, hence affected Apples may show all degrees of external disfigurement. Apples in the final stages of the disease may be completely brown and exhibit a 'baked' appearance."

"(4) In the early stages of this disease the flesh may be firm and crisp although brown, but generally in its later stages internal breakdown is accompanied by softening of the flesh tissues so that it can easily be mashed into

\*These numbers refer to a list of literature cited, which will be published next month. Keep this copy for reference.

†The presence of acetaldehyde, ethyl alcohol and furfural in Apples damaged by brown heart was noticed in 1923 by the writers, but was not published.

The Report of the Food Invest. Board for 1922, received at this Institute in February, 1924, shows that the Hon. Mrs. Onslow and Mr. M.

Thomas had already detected the presence of both acetaldehyde and alcohol.

‡In this connection, the writers wish to express their thanks to Mr. N. B. Brown, the engineer, for practical advice and assistance in the construction of the battery and store, and also for permission to use a process protected by patent; thanks are also due to Messrs. John Chambers and Son Ltd., Wellington, for supplying ammonia fittings at substantially reduced rates,

and to Messrs. W. E. Wilkes Ltd., Richmond, for erecting woodwork at the lowest possible prices.

§The apples placed in the various stores were in exactly similar condition and received the same treatment before storage.

||This view was suggested by Kidd and West, Special Report No. 12, p. 36, footnote, Food Invest. Board, Dept. Sci. and Ind. Res. 1923.



a paste with one's fingers. Softening of the tissue, however, is not an invariable characteristic of this disease."

"(5) A characteristic feature of internal breakdown is that, if any previous injury resulting in killing of tissues has occurred, as for example, bitter pit, bruising, brown heart, etc., a zone of healthy white tissue often persists around the injured parts when internal breakdown develops."

It may be mentioned that the writers have occasionally, particularly with immature fruit, seen the browning confined to the pith of the Apple (i.e., to the flesh between the carpellary chambers and the circle of primary vascular bundles).

There is little doubt that the low temperatures interfere with metabolism and alter the course of both the physical and chemical changes normally occurring in the Apple. There is reason to believe that acetaldehyde is associated with the development of functional diseases, including internal breakdown (11).

#### Control of Internal Breakdown.

Internal breakdown may be eliminated by storage at about 46 degrees F. This temperature is too high, however, to be practicable commercially.

A temperature between those at present employed (generally about 32 degrees to 37 degrees F.), and this higher temperature is required for satisfactory storage of apples; but there are a number of other factors to be considered. These are the following:—

1. Humidity. From the writers' observations it appears that, at low temperatures, excessive humidity decidedly influences the development of internal breakdown.

It is not at present possible to give a definite degree of humidity as suitable for cold storage, but good results have been obtained with humidities between 75 per cent. and 85 per cent.; with different temperatures it is probable that different degrees of humidity will be required to give the best results.

If the storage atmosphere be too dry, excessive shrivelling may occur; this can be controlled by storing only matured fruit, by the use of wrapping paper and by the use of more closely boarded cases.

Some experiments made by the writers in 1924 showed that the respiration of Apples (i.e., carbon dioxide production) was affected by the humidity of the store air, more carbon dioxide being given off under more humid conditions.\*\* Whether this result is general or not requires confirmation.

2. Locality. Locality of orchard (i.e., type of soil) plays an important part in the development of internal breakdown, Sturmer Apples from one locality having better keeping qualities under low temperature storage than those from certain others.

3. Maturity. With higher storage temperatures riper fruit will be less liable to injury from internal breakdown, but, on the other hand, the ripening processes will be quickened and the storage life shortened. It may not be possible to hold the very ripe fruit for so great a length of time, but growers are again cautioned against thinking that a remedy for this lies in storing immature fruit.

It must be recognised that the most suitable maturity at which fruit should be picked is that which produces fruit, after storage, in the best condition for marketing (i.e., neither too soft to carry satisfactorily, nor badly shrivelled). (See also Magness and Taylor.) (13)

¶In connection with temperature it may be mentioned that in chambers with end to end air circulation, a more uniform fruit temperature is obtain-

ed by discharging the cold air at either end alternately.

\*\*It was unfortunately not possible to proceed with this work.

Observations will be made next season, both before and during storage, with a maturity tester of the type described by Magness and Taylor (13); the results obtained will certainly be of interest to fruitgrowers.

4. Variety. That varieties differ in their resistance to internal breakdown has been known since the development of storage trouble in New Zealand; similar results have been obtained in England (10, 11), and also in America.

Those varieties (e.g., Dougherty and Delicious) which in New Zealand stored better under the older conditions of low temperature and high humidity, may not require as high a storage temperature as other varieties which did not store satisfactorily.

Storage trials with different varieties are required, in order to determine the most suitable temperature for each variety. It may be of interest to note that Jonathans in the experimental store apparently kept satisfactorily†† this year, whereas there were losses from internal breakdown in commercial storage.

5. Apple Scald (Superficial Scald). Scald has been shown by a number of observers to be more prevalent at high temperatures; it has also been proved that immature fruit is more susceptible than mature (5, 6, 7, 8, 17, 21). The Jonathan is probably the most susceptible of the varieties stored in New Zealand, and, if the storage temperatures are to be raised, some means of controlling scald will probably be required.

To Brooks, Cooley and Fisher, in America, is due the credit for the method of control. This consists in the use of wrapping paper impregnated with at least 15 per cent. of odourless mineral oil, and also in the use of similar shredded paper. The same workers have shown that there are four periods in the development of scald, the first six to eight weeks of storage being the most critical; thorough ventilation of the chambers during this period may entirely overcome the disease. The present writers suggest that thorough ventilation accompanied by oil scrubbing of the air in the ducts might be found more convenient than the use of oiled wrappers; this, of course, applies to fruit stored in cases and not to fruit in barrels.††

Apart from the unsightly appearance of scalded Apples fungal invasion generally follows, and results in the complete rotting of the fruit.

In connection with scald, mention may be made of two other types of disease which appear to be very similar: these are (1) lenticel spotting and (2) a brownish discoloration of the skin not due to fungi.

Lenticel spotting has been observed by the writers with Cleopatras, and the second type with Delicious, Sturmers and Munroes (i.e., Dunn's Favorite), particularly when the fruit has been kept for some time in the packing shed before storage.

Lenticel spotting (12) can be controlled by the use of oiled wraps and it is probable that the blotching of the skin, mentioned above, can be similarly eliminated.

6. Ventilation. As mentioned above, adequate ventilation reduces damage by scald; ventilation is, however, of greater importance in preventing any large accumulation of carbon dioxide which would cause brown heart.

At higher temperatures the respiration of the fruit will be more rapid, and, consequently, ventilation will need to be carried out more frequently; as indicated last year (14), the most suitable time is when the outside temperature is low. It may be well to point out that ventilation

††The experiment was on a small scale only.

††Storage in barrels is not practised in N.Z.

is still necessary towards the end of the storage season even when the chambers contain but little fruit; "tainted" fruit has been noticed this season owing to lack of care in this matter.

7. Fungal Activity. It is well known that fungal activity is less at low temperatures, and that, from this point of view, a temperature of about 32 degrees F. is best suited for the cold storage of Apples. With rise in storage temperature greater damage from fungal action is likely to occur, and greater care will therefore be needed in the selection of fruit for storage. Losses from fungal activity may be reduced by storing only sound fruit, by greater care in the spraying and handling of the crop, and by thorough disinfection of the cool stores at the beginning of the season.

8. Seasonal Variation. Apples produced in different seasons may vary greatly in the keeping qualities, for example, Ballard, Magness and Hawkins (4), found that in some seasons internal browning was almost absent in the Yellow Newtown Apple, whereas in others it was very severe, and similar results have been obtained by other investigators.

From an examination of the storage results this season, it appears that season 1924 was a better one than 1925.

The factors which make one season better or worse than another are no doubt numerous, but heavy and continuous rain immediately previous to picking appears to be a contributory factor, as the following table shows (15). (See also p. 183.)

|                                                                   | Flesh collapse (i.e., Internal Breakdown). |         |        |
|-------------------------------------------------------------------|--------------------------------------------|---------|--------|
|                                                                   | Bad.                                       | Slight. | Total. |
| Fruit picked before rain . . .                                    | 11%                                        | 56%     | 67%    |
| Fruit picked from same trees four days later after heavy rain . . | 26%                                        | 56%     | 82%    |

It does not seem probable that the additional maturity due to the extra four days on the tree can be the cause of the marked increase in the amount of disease.

Further research is required to find out whether there is some easily observed factor which indicates the predisposition of Apples to internal breakdown.

9. Age of Tree. It is well known among orchardists that fruit off young trees (up to 7-8 years) does not store well, and this fruit is not usually stored.

#### Summary.

From the foregoing it will be seen that for the satisfactory storage of fruit a large number of factors needs consideration; it is evident, however, that some change will have to be made in the storage temperatures. To raise

the temperature high enough to entirely avoid internal breakdown is not practicable commercially, but it is probable that a temperature of about 38 degrees F. to 40 degrees F. combined with a reasonably low humidity, will reduce the amount of loss to a minimum and confine the damage to that designated as "slight," which scarcely affects the Apples for commercial purposes. The question of differential treatment of Apples from different localities and of different varieties also requires consideration.

It may be permissible to reduce the temperatures as the storage season progresses, but until this experiment has been tried on a small scale and in several seasons great caution must be observed.

#### Storage of Pears.

For the satisfactory storage of Pears a low temperature is essential, and one which has given excellent results in practice is a flesh temperature of 32 degrees F. |||

The maturity of pears for storage is also a matter of importance; excessively green Pears shrivel badly and are tasteless, and over-ripe Pears do not stand lengthy storage. (See also Adam and Harrison.) (3)

Delay in storage is very undesirable.

#### Storage Results for 1925.

This season, as before, the main experiment has been with Sturmers, but the experiments with Jonathans have also been continued. The picking and handling of the fruit have been carried out in the manner originally described; it may be also noted that (as before) the Apples at the different stages of maturity were all picked off the same trees, which were of approximately the same age in the different localities, and on the same root stock.

The importance of the proper selection of fruit for experimental work cannot be over-emphasised, as little value can be attached to results in which these factors are not considered. |||

In the results which follow the points which have been investigated are:—

1. Maturity.
2. Locality.
3. Variety.
4. Delayed Storage.
5. Cool Store Conditions.

Table I. shows the results obtained with Sturmers in four stores, of which No. 4 is the experimental store referred to on page 2; the figures represent percentages of internal breakdown (i.e., flesh collapse).

Table II. indicates the commercial damage by shrivelling. Table III. gives the dates of picking Sturmers.

§§All old cases into which fruit is picked in the orchard should undoubtedly be sprayed with a fungicide before the beginning of the picking

season.

|||We are indebted to Mr. N. B. Brown for permission to make use of this temperature.

¶¶See also Dept. of Sci. and Ind. Research. Food Invest. Board Report. 1923. p. 34.

TABLE 1.—STURMER RESULTS.

| Date of Examination. | Locality. | Store No. 1. |      |         |        | Mature. |      |         |        | Overmature. |      |         |        |
|----------------------|-----------|--------------|------|---------|--------|---------|------|---------|--------|-------------|------|---------|--------|
|                      |           | Bad.         | Mod. | Slight. | Total. | Bad.    | Mod. | Slight. | Total. | Bad.        | Mod. | Slight. | Total. |
| Nov. 8               | A         | 4            | 8    | 44      | 56     | 16      | 9    | 46      | 81     | —           | —    | —       | —      |
|                      | B         | 0            | 1    | 18      | 19     | 3       | 3    | 26      | 32     | 0           | 0    | 13      | 13     |
|                      | C         | 0            | 0    | 14      | 14     | 0       | 2    | 20      | 22     | 0           | 0    | 7       | 7      |
| Dec. 20              | A         | 3            | 9    | 55      | 67     | 16      | 14   | 43      | 73     | 6           | 8    | 43      | 57*    |
|                      | B         | 0            | 1    | 42      | 43     | 3       | 4    | 39      | 46     | 1           | 4    | 34      | 39     |
|                      | C         | 0            | 0    | 30      | 30     | 0       | 1    | 32      | 33     | 0           | 2    | 32      | 34     |

\*With this overmature fruit the results are vitiated to some extent by the amount of rotting which occurred.



## Store No..2.

| Date of Examination. | Locality. | Mature      |             |                |               |
|----------------------|-----------|-------------|-------------|----------------|---------------|
|                      |           | Bad. per c. | Mod. per c. | Slight. per c. | Total. per c. |
| Nov. 4               | A         | 3           | 5           | 34             | 42            |
|                      | B         | 1           | 1           | 15             | 17            |
|                      | C         | 0           | 0           | 0              | 0             |

## Store No..3.

| Date of Examination. | Locality. | Mature      |             |                |               | Date of Examination. | Locality. | Mature      |             |                |               |
|----------------------|-----------|-------------|-------------|----------------|---------------|----------------------|-----------|-------------|-------------|----------------|---------------|
|                      |           | Bad. per c. | Mod. per c. | Slight. per c. | Total. per c. |                      |           | Bad. per c. | Mod. per c. | Slight. per c. | Total. per c. |
| Nov. 5               | A         | 72          | 16          | 6              | 94            | Dec. 26              | A         | 86          | 6           | 3              | 95            |
|                      | B         | 43          | 27          | 26             | 96            |                      | B         | 45          | 21          | 31             | 97            |
|                      | C         | 25          | 33          | 41             | 99            |                      | C         | 25          | 30          | 43             | 98            |

## Store No..4. EXPERIMENTAL STORE.

| Date of Examination. | Locality. | Immature    |             |                |               | Mature.     |             |                |               | Overmature. |             |                |               |
|----------------------|-----------|-------------|-------------|----------------|---------------|-------------|-------------|----------------|---------------|-------------|-------------|----------------|---------------|
|                      |           | Bad. per c. | Mod. per c. | Slight. per c. | Total. per c. | Bad. per c. | Mod. per c. | Slight. per c. | Total. per c. | Bad. per c. | Mod. per c. | Slight. per c. | Total. per c. |
| Dec. 10              | A         | 15          | 13          | 56             | 84            | 39          | 20          | 30             | 89            | —           | —           | —              | —             |
|                      | B         | 4           | 2           | 49             | 55            | 13          | 7           | 45             | 65            | —           | —           | —              | —             |
|                      | C         | 1           | 3           | 50             | 54            | 5           | 11          | 57             | 73            | 17          | 22          | 55             | 94            |
| Dec. 24              | A         | 25          | 15          | 46             | 86            | 63          | 11          | 18             | 92            | 61          | 10          | 11             | 82*           |
|                      | B         | 6           | 3           | 48             | 57            | 23          | 11          | 45             | 79            | —           | —           | —              | —             |
|                      | C         | 2           | 3           | 55             | 60            | 6           | 10          | 61             | 77            | 21          | 25          | 47             | 93            |

\*Results vitiated by rotting.

TABLE II.

Showing Commercial Damage by Shrivelling.

| Store No.          | Date Examined. | Locality. | Im-mature. |        | Over-mature. |        |
|--------------------|----------------|-----------|------------|--------|--------------|--------|
|                    |                |           | per c.     | per c. | per c.       | per c. |
| Store No. 1.       | Nov. 8         | A         | 40         | 9      | —            | —      |
|                    |                | B         | 50         | 15     | 3            | —      |
|                    |                | C         | 40         | 11     | 6            | —      |
|                    | Dec. 20        | A         | 36         | 26     | 16           | —      |
|                    |                | B         | 65         | 24     | 13           | —      |
|                    |                | C         | 45         | 12     | 22           | —      |
| Store No. 2.       | Nov. 4         | A         | —          | 4      | —            | —      |
|                    |                | B         | —          | 15     | —            | —      |
|                    |                | C         | —          | 2      | —            | —      |
| Store No. 3.       | Nov. 5         | A         | —          | 0      | —            | —      |
|                    |                | B         | —          | 0      | —            | —      |
|                    |                | C         | —          | 0      | —            | —      |
|                    | Dec. 26        | A         | —          | 2      | —            | —      |
|                    |                | B         | —          | 3      | —            | —      |
|                    |                | C         | —          | 0      | —            | —      |
| Store No. 4.       | Dec. 10        | A         | 48         | 20     | —            | —      |
|                    |                | B         | 63         | 18     | —            | —      |
|                    |                | C         | 43         | 10     | 8            | —      |
| Experimental Store | Dec. 24        | A         | 51         | 18     | 4            | —      |
|                    |                | B         | 64         | 27     | —            | —      |
|                    |                | C         | 57         | 17     | 8            | —      |

TABLE III.

Date of Picking Sturmers.

| Locality. | Immature. | Mature.  | Overmature. |
|-----------|-----------|----------|-------------|
| A         | March 20  | April 16 | May 18      |
| B         | March 26  | April 17 | May 28      |
| C         | April 2   | April 27 | June 5      |

## 1. Maturity.

The figures in Table I. show clearly how the influence of maturity on the development of internal breakdown may be modified by storage conditions, e.g., compare stores No. 1 and No. 4.

Maturity appears to be a rather more important factor this season than last; this is probably accounted for by seasonal variation, and perhaps because of the greater amount of rain during the latter part of the ripening period.

It is of interest to mention here a functional disease which was fairly prevalent this season, particularly in certain localities. The cause would appear to be connected with heavy rains following dry weather and with increasing maturity; it may be connected with watery core.

Table IV. gives the percentages of apples suffering from this trouble.

TABLE IV.

Showing Amounts of the Functional Disease.

| Locality | Immature. per cent. | Mature. per cent. | Overmature. per cent. |
|----------|---------------------|-------------------|-----------------------|
| A        | 0                   | 1                 | 8                     |
| B        | 0                   | 2                 | 50                    |
| C        | 0                   | 12                | 12                    |

## 2. Locality.

The influence of locality is also modified by storage conditions, but there is no doubt that orchard locality or the effect of the soil greatly influences susceptibility to internal breakdown.

Kidd and West (11) in England, have obtained results showing the importance of locality and it is of interest to quote from their work. "The premature onset of internal breakdown in cold storage is by no means only a question of season. Locality may have a determining effect even in a bad season."\*\* For example, whereas in the season 1922-1923 Bramley's Seedlings from four localities were suffering heavily in cold storage, as stated above, the same variety from a fifth locality was showing the normal beneficial effects of cold storage as compared with ordinary storage."

See also Stubenrauch (18); Ballard, Magness and Hawkins (4); Winkler (22); and Overholser, Winkler and Jacob (16).

It must not be inferred from the above, however, that it may not be possible to alter storage conditions in New Zealand so as to keep satisfactorily, fruit from any locality.

### 3 and 4. Variety and Delayed Storage.

Delayed storage experiments have been carried out with both Sturmers and Jonathans this season, and while the results bear out those obtained during the seasons 1922, 1923 and 1924, the effects of delaying storage, detrimental with Sturmers and beneficial with Jonathans, are lessened by the alteration in storage conditions.

The results for Sturmers are shown in Table V., and for Jonathans in Table VI.

TABLE V.  
Delayed Storage of Sturmers.

| Date of Examination. | Locality. | Store No. 1.<br>Time Kept<br>Out of Store. | Internal Breakdown. |                |                   |                  |
|----------------------|-----------|--------------------------------------------|---------------------|----------------|-------------------|------------------|
|                      |           |                                            | Bad.<br>per c.      | Mod.<br>per c. | Slight.<br>per c. | Total.<br>per c. |
| Nov. 10              | C         | 0 weeks                                    | 0                   | 2              | 20                | 22               |
|                      |           | 6 weeks                                    | 1                   | 2              | 34                | 37               |
| Dec. 20              | C         | 0 weeks                                    | 0                   | 1              | 32                | 33               |
|                      |           | 6 weeks                                    | 0                   | 2              | 44                | 46               |

TABLE VI.

### Delayed Storage of Mature Jonathans.

| Date of Examination. | Time Kept<br>Out of Store. | Internal Breakdown. |                   |                      |                    | Shrivalled,<br>Commercially Damaged.<br>per cent. |
|----------------------|----------------------------|---------------------|-------------------|----------------------|--------------------|---------------------------------------------------|
|                      |                            | Bad.<br>per cent.   | Mod.<br>per cent. | Slight.<br>per cent. | Total<br>per cent. |                                                   |
| Aug. 18              | 0 weeks                    | 1                   | 2                 | 19                   | 22                 | 16                                                |
|                      | 3 weeks                    | 0                   | 1                 | 12                   | 13                 | 26                                                |
|                      | 5 weeks                    | 0                   | 2                 | 10                   | 12                 | 24                                                |
| Oct. 12              | 0 weeks                    | 3                   | 3                 | 34                   | 40                 | 22                                                |
|                      | 3 weeks                    | 4                   | 4                 | 28                   | 36                 | 30                                                |
|                      | 5 weeks                    | 5                   | 3                 | 25                   | 33                 | 26                                                |

Fruit from locality C, picked March 18.

## APPENDIX.

### "Gas" Storage of Apples.

As it is one of the objects of the Institute to assist fruitgrowers, the following account of the "gas" storage method is included here, because the original work of

In connection with Jonathans it was noted last season that in some instances growers had obtained very good storage results by storing more mature fruit, and Table VII. gives the results obtained in an experiment this season.

TABLE VII.  
Results of Storing Overmature Jonathans.  
(\*Stored immediately.)

| Examined. | Internal Breakdown. |                |                   |                  | Shrivalled,<br>Commercially<br>Damaged.<br>per c. |
|-----------|---------------------|----------------|-------------------|------------------|---------------------------------------------------|
|           | Bad.<br>per c.      | Mod.<br>per c. | Slight.<br>per c. | Total.<br>per c. |                                                   |
| Oct. 12   | 5                   | 5              | 18                | 28               | 12                                                |

Fruit from locality C, picked May 4.

The differences between the overmature and mature Jonathans are small, but as regards appearance the overmature were better.

### 5. Cool Store Conditions.

The conditions under which the experimental store was run are given on page 180, but no details of those obtaining in the other stores can be given, as they are confidential.

In one store where the temperature was rather high, the loss from fungal rots in November was 25 per cent., whereas exactly similar fruit in the other stores was practically free from rots in December.

In conclusion the writers wish to express their thanks to the cool store engineers and proprietors for facilities in carrying out these experiments.

The expenses of the investigations since 1923 have been partly met by grants from the Government Research Fund of the New Zealand Institute and from the Nelson Provincial Fruitgrowers' Council.

\*\*\*The black is ours.

\*Delaying storage for a few days might have improved the results.

Kidd and West on this subject is published in papers to which fruitgrowers do not usually have access.

The object of the "gas" storage method is to allow growers to store fruit (without the use of refrigeration) for a longer period than is possible in an ordinary orchard store.

This is made possible by utilising the carbon dioxide given off from the Apples. The following description is



taken from the Report of the Food Investigation Board for 1921.

"The principle of the method of 'gas' storage is to keep the Apples in an atmosphere containing (1) 5 per cent. to 8 per cent. oxygen, as compared with 21 per cent. in normal air, and (2) 12 per cent. to 15 per cent. carbon dioxide as compared with minute traces in normal air. When apples are enclosed in a gas-tight chamber, the respiration of the living fruit itself changes the normal atmosphere, giving off carbon dioxide and absorbing oxygen. By means of a carbon dioxide Katharometer the percentages of carbon dioxide present in the chamber can be read on a scale. When there is sufficient present small ventilating ports communicating with the exterior are opened. It is essential not to work beyond the lower

limit of 5 per cent. oxygen and the upper limit of 15 per cent. carbon dioxide."

It may be mentioned that for "gas" storage it is essential that the apples be wrapped in oiled wrappers and preferable that they be stored in trays and not in boxes.

Further information on this method can be found in the Reports of the Food Investigation Board (Dept. Sci. and Ind. Research, London) for 1920 to 1924 inclusive; the 1923 Report gives a plan of a store to hold 20 tons of Apples. Copies of these publications may be obtained from the Government Printer, Wellington, New Zealand.—From a Bulletin issued by the Cawthron Institute, Nelson, N.Z.

## Fruit Essences.

### Application for Protection.

Further evidence was heard before the Tariff Board, at Melbourne, on March 12, in connection with the application by Australian Essence Manufacturers, for increase duties. This was the final hearing, the evidence previously having been taken in Sydney and Adelaide.

Evidence was given by Albert Hugo Koch, Public Analyst, Collins Street, Melbourne, who has been engaged for the last 23 years in the analysis and examination of fruit, essences, cordials, aerated water, etc. He referred to the cloudiness complained of in aerated drinks following the use of Australian essences, with the object of accounting for the cause of this cloudiness. In those cases where comparative tests of imported and Australian essences of similarly described flavors such as Lemon, Raspberry, Strawberry, Pineapple, etc., had resulted in cloudiness appearing in aerated drinks flavored with Australian essences, while those flavored with imported essences remained bright, the cause of this cloud, except in the case of essence of Lemon, was the fact that the natural fruit was the base of the Australian essence, and that the imported was wholly or mainly synthetic.

Synthetic essences contain no fermentable ingredient. Natural fruit essences, either pure or compounded with synthetic or imitation, essences contain fermentable vegetable, which

cannot deteriorate while preserved in the essences, but when the latter is added to the syrup, the water prior to aeration, the dilution sets the vegetable matter free, and capable of setting fermentation under favorable conditions. The addition of preservative in proportion as permitted by the food regulations, would effectively prevent such fermentation. Regarding essence of Lemon, he agreed that no separation of Lemon oil occurred subsequent to the addition of soluble essences of Lemon to aerated waters, and that if the product were bright on first addition it would not become cloudy after storing.

In reply to a question from the chairman, Mr. Koch replied that a soluble terpeneless oil of Lemons from Italy would not be equal to a soluble terpeneless oil of Lemon prepared in Australia from Australian Lemons, and that there appeared to be more synthetic used in the manufacture of the imported article than the local article.

The enquiry is now closed, and in due course the Board will make its recommendation to the Minister. It is to be hoped, in the interests of the fruitgrowing industry, that their recommendation may be such that essence manufacturers will be encouraged to largely extend their operations and replace by their Australian manufactured article the large quantities that have previously been imported from overseas.

As considerable opposition has been displayed by importers of essences, and statements entirely unjustified have been made, damaging to the quality of Australian fruit, it behoves all concerned to take a practical interest in the matter and to request their Federal Parliamentary representatives to do what they can to support the earnest efforts the essence manufacturers are making to establish their industry.

## DEPLETED TIMBER SUPPLIES.

### Fibre Containers are taking the Place of Wood.

Australia, in common with all other part of a timber shortage. An announcement of the first importance is now made to the effect that fibre cases can be used in place of timber, thus showing a stupendous saving.

We are in receipt of a very interesting article from Messrs. J. Fielding & Co. Ltd., Buckingham St., Sydney, enclosing an article from the U.S.A. Forests' Products Laboratory, which maintains a laboratory to watch careless users of timber owing to the fast diminishing world's supplies. It is pointed out that in 1923 there were used in America 143,000,000 solid fibre cases for the packing of all canned foods, which cases have taken the place of wood.

These results show an amazing saving in timber. The quantity of fibre boxes produced from a 1,000ft. log of timber is 108,000, as against 2,970 boxes of wood from the same log. These figures are in the ratio of 1 to 36.4, i.e. a given quantity of logs, 16 inches in diameter will produce over thirty-five times as many fibre containers as it will wood boxes of the same size.

It is further to be noted in this connection that the fibre containers offer a further advantage from the point of view of forest conservation in that the logs used for pulping are of smaller diameter than those used for the manufacture of box wood, and require less than half as long a time to grow, so that re-afforestation is much more attractive in the case of pulp woods.

Additional information in the form of scientific calculations is available on request.



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It is usually best to leave the new growth undisturbed until the wood is well ripened in late fall or early Winter, before training the canes to a trellis.

There is no "best trellis" that will be accepted by all growers and under all conditions. In the berry regions of Oregon, Washington and British Columbia, where heavy crops of Evergreen Blackberries are produced, a

double wire trellis is most popular, using two sets of two parallel wires, each strung to cross-pieces on cross posts. The lower wires are about 18 inches from the ground and support the young growing canes; the upper set is four feet high and holds the fruiting canes and crop. All canes are supported on the trellises by cross-sticks notched with a saw to slip over the wires of each set at intervals of 24 and 30 inches apart. The fruit is massed at a convenient height for picking and large yields are harvested.

In California a two or three-wire trellis quite similar to that used for Grapes is most popular for Loganberries, Dewberries and trailing Blackberries.

For cutting out the canes, two-foot pruning shears, hand shears, and a long-handled pruning hook are good tools. Various types of choppers and cane burners have been tried by commercial growers and experimenters, but most of these have been discarded. The general practice is to burn the canes in small piles in the field or in the alleys at the end of the rows.

## BLACK CURRANTS.

Valuable Experiments in England.

A well-attended conference of English horticulturists was held at the Midland Agricultural and Dairy College recently, when Dr. Hatton, Director of the East Malling Research Station, opened a discussion on "Some Aspects of Black Currant Growing."

Dr. Hatton stated that some years ago they obtained specimens of all so-called varieties on the market, and after careful study they came to the conclusion that the naming of Black Currants was hopelessly involved, and that in reality there are only four distinct varieties, which fall in two main groups as follows:—

Red-budded types—(a) French group; (b) Boskoop Giant.

White-budded types—(a) Baldwin group with long, ragged and protruding buds; (b) Goliath group with small often-crowded buds.

It was only recently that crossing had been done, and it was found that Black Currants breed true to type; Baldwin tends to sport.

Dr. Hatton gave results of cropping trials carried out under uniform conditions for four years. The varieties were planted 1,200 bushes to the acre as yearlings, and gave an average yield for the four years as follows:—Baldwin, 32 cwt.; Goliath, 25

cwts.; Boskoop, 25 cwts.; Seabrooks (black), 23 cwts.; French (black), 21 cwts.

They found Baldwin "came into cropping" earlier after planting than the other varieties, and in addition to the increased yield made double the price of Boskoop, which clashes with the Continental supply.

Dealing with some of the causes of non-cropping, he considered that some varieties cropped badly owing to the difficulty of pollination, and, as to reversion, mentioned that it could now be definitely stated that it was transmissible by grafting or inarching.

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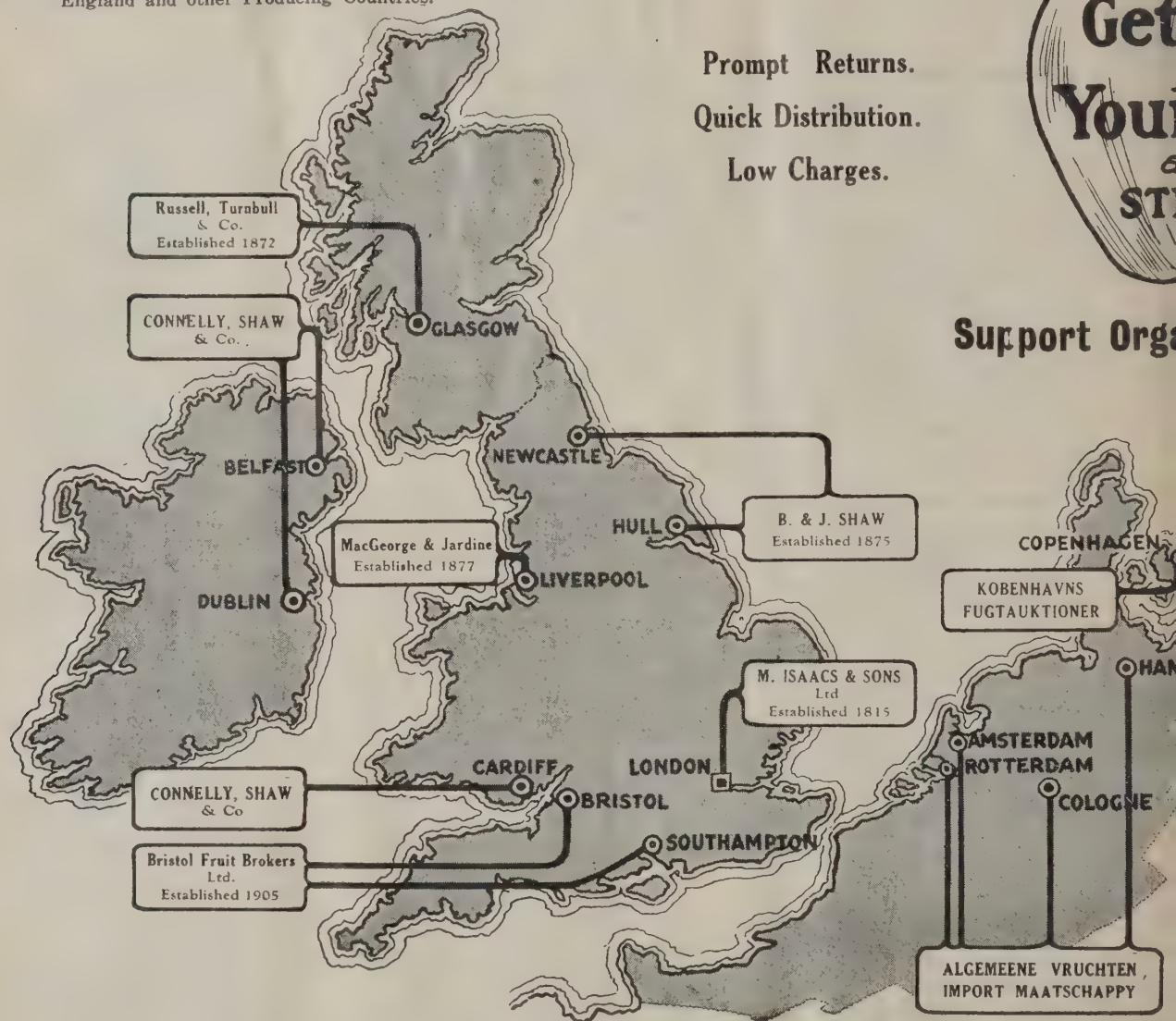
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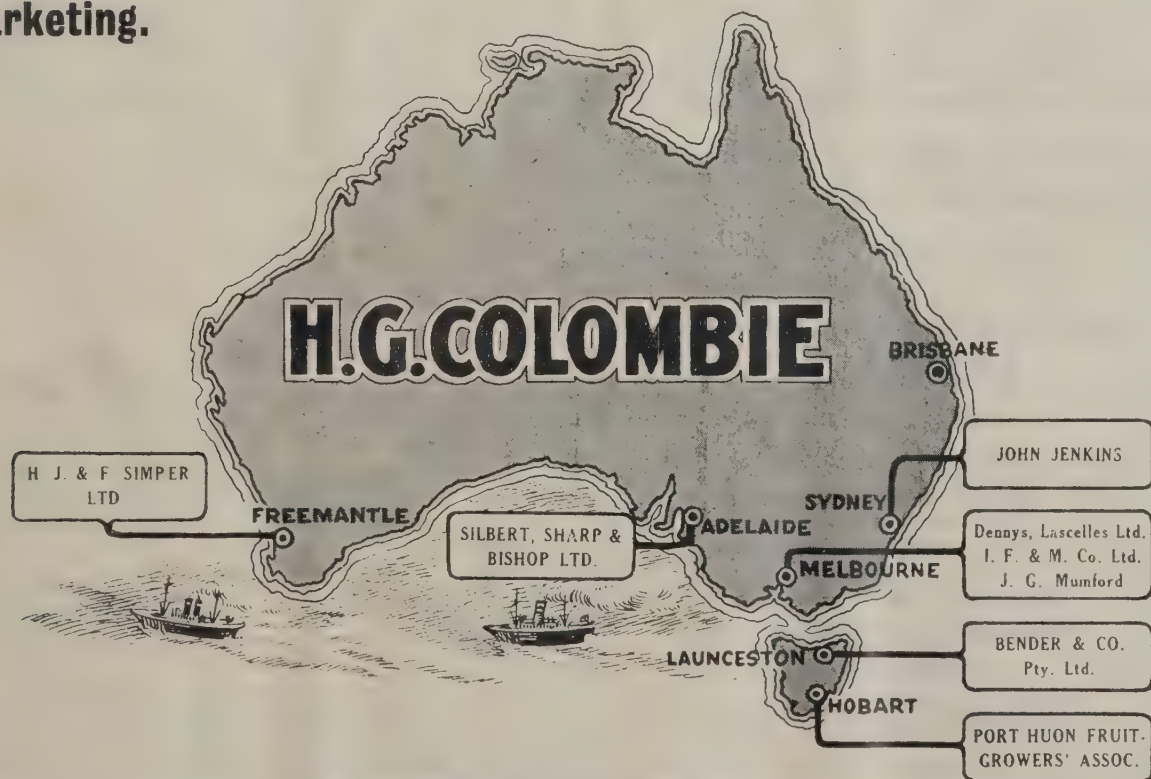
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## Control of Red Spider.

Oil 1-10 in Winter is Best.

Valuable Tests by Tasmanian Department of Agriculture.

By P. H. Thomas, State Fruit Expert.

**O**F LATE YEARS the red spider has become rather troublesome in certain Tasmanian fruit districts. Unlike pests which destroy or render the fruits attacked unfit for marketing, the spider plays havoc amongst the fruit buds that are forming to produce the next season's crop. The careless orchardist is apt to neglect treatment through not recognising the cause of failing production.

The red spider (*Bryobia pratensis*) is generally found in colonies on the underside of the foliage of the infested trees, and is more prevalent toward the autumn months. The small red globular eggs are laid in the crevices of the bark on the trunk and limbs of the tree during the autumn months. In cases of bad infestation these may almost entirely cover the bark, giving portion of the tree a reddish tinge. The young spiders commence to hatch out as soon as the spring foliage commences to appear, and in the first stage are light red in color. They change to more of a brownish tint as they reach the adult stage.

Unlike other kinds of spiders, *Bryobia pratensis* is a non web-spinning species, and moves freely about on the host plant, extracting the juices of the foliage upon which it exists.

In Tasmania the red spider is generally more prevalent in the early summer months, and it is noticeable that certain varieties of Apples are much more subject to infestation than others, particularly Dunns or Munro's Favourite and the London Pippin.

### The principal damage

wrought by this pest is confined to the foliage, the spiders puncturing the epidermis of the leaf, and sucking out the sap and juices which it contains. This causes the foliage to become pale and yellowish in colour, and very often a premature dropping will take place. When this occurs the fruit on the affected trees will remain small and ripening will be retarded.

In accordance with the policy of the Fruit Division a plot was selected at Mr. P. Page's orchard, Huonville, to demonstrate the most effectual methods for the control of this pest. An area of Sturmer Pippins being chosen which had suffered very much from the attacks of the Spider last season.

The plot, which comprised trees of approximately 30 years of age, upon examination during the winter, was found to be much infested, numerous eggs of the spider being in evidence upon the limbs and branches.

The plot was divided into five sections receiving the following treatments detailed:—

Section A. Check rows untreated.

Section B. Oil Emulsion (1-10) applied at the dormant period (Aug. 25th).

Section C. Oil Emulsion (1-14) applied

Section D. Lime Sulphur (1-8) 33deg. Beaume Test.

Section E. Lime Sulphur (1-12) 33deg. Beaume Test.

An examination was made of the different sections at intervals during the growing season, it being soon evident that certain treatments had exercised a better control than others.

On October 15th, a careful comparison was made of the results secured. The check rows, Section A, at this period were again badly infested and already showing a yellowish tinge from the depredations of the Spider.

Section B, which was treated with Oil Emulsion and adjacent to the untreated rows, was practically free of the pest, remaining so until mid-December, when an occasional spider was visible.

In Section C good results were obtained, but it was evident that the weaker application had not given as good a control. These remarks also apply to Sections D and E, which, at the time of the examination, were showing a fair percentage of spiders which had survived the treatments.

In order to test out the most effectual method of summer control, the check rows, and those which were showing traces of the spider, were

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again treated with Oil Emulsion (1-60), Nicotine Sulphate (1 pint to 50 galls.), and Atomic Sulphur (1 lb. to 12 galls.).

Very little results were gained by these applications except in the case of the trees treated with Atomic Sulphur, which reduced the infestation considerably.

### Oil 1-10 in Winter.

From the foregoing it is evident that in order to effectually control the red spider it is necessary to apply a strong contact insecticide at the dormant period, oil emulsion 1-10, giving the best results and exercising a better kill than weaker mixtures, or those comprising lime sulphur. This should secure almost complete immunity during the season, if thoroughly applied.

If this spray is neglected, the orchardist has very little chance of effectually controlling the pest when established and operating during the

growing season, as the habits of the spider in sheltering on the undersides of the leaves protect it from contact sprays, no matter how carefully applied. Another factor that has to be considered in this respect is the likelihood of injury to fruit and foliage, and although good results might be obtained with other contact insecticides, they could not be applied without risk of injury.

Of the two sprays used which are of a volatile nature (Nicotine Sulphate and Atomic Sulphur) the former was very disappointing in the results obtained, the spiders seeming to withstand the treatment even at a strength of 1 pt. to 30 galls.

Atomic Sulphur gave more promising results, and could be recommended as the best treatment for Apples during the growing season. The important and essential, however, is not to omit the strong dormant oil spray.

### NEW SEEDLING APPLE STOCK.

#### Tests in New South Wales.

In reply to a question regarding a new seedling stock for Apple trees, Mr. W. J. Allen, Fruit Expert and Irrigationist, N.S.W. Department of Agriculture, writes as follows:—

Some years ago it was noticed that there were some Gravenstein Apple trees growing on the South Coast,

which had been worked on seedling stock. The trunks and limbs of the trees worked on this particular stock have not shown any signs of twisting, and the production of fruit, both for quality and quantity has been very satisfactory.

In the Bathurst district there are also a number of Apple trees worked on seedling stock which have yielded consistently good crops. For the last ten years the Department has been

obtaining roots of these trees and working Gravensteins on them, and in whatever part of the State the young trees have been planted they have done remarkably well.

The seedling in question is of unknown origin. For testing purposes some of the roots have been allowed to grow, but the foliage and general growth have been different from any variety at present used as a stock,



## Experiments with Plum and Prune Stock.

(By W. W. Cooke, Orchardist, Yanco Experiment Farm N.S.W.)

THE SELECTION of the right stock on which to work fruit trees is of the utmost importance, as on the kind of root given to the tree often depends its further usefulness and the number of years it will continue to produce payable crops of fruit. The question of stock may be considered from two points of view. In the first, the selection remains in the hands of those raising the trees in the nursery, and it is, or should be, their aim to choose that which is known to give the best results with the variety being propa-

graft or bud them with the desired variety. Then arises the question whether the variety chosen will succeed on this particular stock.

To gain some information as to the chance of Plums and Prunes proving successful when worked on Peach and Apricot stock, and also to find out, if possible, what is the best stock on which to grow these fruits under irrigation, an experiment was commenced at Yanco Experiment Farm in 1917.

The following stocks were selected, and were planted in rows in the order mentioned:—Myrobalan, Marianna, Apricot, Peach. Later they were worked in rows running across, with Angelina Burdett and President Plums, and with Clariac Mammoth (syn. with Robe), Prune D'Agén, and Robe de Sergeant Prunes.

The growth made by the Plums on the different stocks varied considerably. Both Angelina and President made very vigorous growth on the Peach and Apricot, fairly strong growth on Myrobalan, and rather weak growth on Marianna. The order in which they commenced to bear fruit was as follows:—First on Marianna; second on Myrobalan; third on Peach; fourth on Apricot.

Both varieties on Marianna soon began to produce heavy crops of fruit, the new growth made by the tree becoming weaker accordingly; these trees were also inclined to bear on wood a year younger than on the other varieties. The tendency to over-production of fruit, in spite of heavy pruning, has resulted in the trees being of less size on this stock than on any of the others.

Both varieties of Plums on Myrobalan stock came early into bearing and are making fair growth, though not nearly so good as on Peach and Apricot. Though later in producing payable crops, those on Peach and Apricot are now bearing well, and the larger size of the trees gives them a decided advantage. Whether or not this will be maintained in the future cannot yet be stated definitely.

In 1922 one row was re-worked with Standard Prune and Grand Duke and Blue Imperatrice Plum. So far the growth made by all varieties is weak on Marianna, fairly strong on Myrobalan and strong on Apricot and

Peach. Next season should give some idea as to how they will bear on the different stocks.

With the different varieties of Prunes the growth is more uniform, though those on Peach and Apricot stock have made the strongest, then those on Myrobalan, with Marianna last. The trees worked on the latter stock, however, came into bearing first, those on Apricot being last. Last year all produced good crops irrespective of variety or stock.

Although considerably more time is necessary before definite conclusions can be drawn, it would appear from the results so far obtained, that

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gated, but there are occasions when it is desired to change the kind of fruit being produced on established trees, e.g., to change from Peaches to Apricots, or from Apricots to Plums. In this case the stock is already determined and it is only possible to select the variety to be worked on such trees.

As the requirements of the fruit markets are continually changing, the owner of a small block of, say, Peaches, may find that his trees are not profitable, owing to the variety or distance from market, etc. He may consider that Plums or Prunes would pay him much better. If the trees are young he may hesitate to grub out the block, and would prefer to

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moderately young Peach or Apricot trees can be reworked with any of the varieties of Prunes or Plums above-mentioned with reasonable hopes that they will bear remunerative crops of fruit. Also, that owing to the poor growth made by Angelina Burdett and President Plums when worked on Marianna stock, and the tendency to over-produce fruit, this stock is not suitable for either variety on soil of such heavy nature as that here.—Agricultural Gazette of N.S.W.

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## Apricots on either Apricot or Plum Stock:—

Blenheim (Shipley), Hemskirke, Mansfield, Moorpark, Newcastle, Oullins' Early, Royal (American), Tilton and Trevatt.

## Plums

Angelina Burdett, Golden Drop, Diamond, Damsons, Grand Duke, Green Gage, Jefferson, Magnum Bonum, Pond's and President.

## Prunes

D'Agen (true French), Robe de Sargeant, Splendour, Sugar.

## Japanese Plums

Apple, Ballena, Burbank, Kelsey, Delaware, October Purple, Santa Rosa, Satsuma, Wickson, Wilson.

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You can order GOODMAN Trees through our local agents or direct, and now is the time to do it. Catalogue of horticultural information mailed on request. Submit list of your tree requirements and we will be glad to send quotations.

# CHAS. J. GOODMAN

Picnic Point Nurseries

BAIRNSDALE, Victoria.



# Australia's Progress and Development.

## Evil of Government Interference

Review by Chamber of Commerce.

THE Annual Conference of the Associated Chambers of Commerce, was opened at Sydney, on March 15. A striking address was delivered by the president, Sir Lennnon Raws.

In this address (republished from the Melbourne "Herald"), Sir Lennnon

essentially economic and financial were regarded as capable of political solution. This was an obstacle to the rapid return of peace and prosperity.

But though the tendency abroad had been for Governments to evacuate the field of finance, in Australia, except in the return to gold and the new charter of the Commonwealth Bank, the grip which politics got on trade and finance during the war was almost as tight as ever.

### £257,000,000 Borrowed.

Everything was in favor for a speedy recovery from war losses and the aftermath of the post-war boom—good seasons and good prices for our exportable products—yet there was still continual dissatisfaction and complaint in both primary and secondary industries.

Subject to qualifications responsibility for the causes of these complaints lay primarily at the door of the Governments. Borrowing abroad to the extent of over £257,000,000 in ten years led to a heavy increase in imports, and higher costs of production were due in part to the operations of Arbitration Courts and wage tribunals, to excessive taxation, to increased cost of Government services, and to many restrictions placed by Governments on trade.

Omitting payments by the Commonwealth to States, expenditure from revenue in 1913-14 was £62,020,683, whereas in 1924-25 it was £153,016,644, an increase of £90,995,781, or £93,227,865, if allowance were made for decrease in Commonwealth expenditure from revenue on new works. This increase was 150 per cent, whereas, based on 1911 values, total production had increased only by about 5 per cent.

Of this enormous increase £29,045,709 was war expenditure, including war interest; railways, etc., increased by £20,045,709, post office by £5,131,415, invalid and old-age pensions and maternity bonus by £5,124,326, while interest and sinking funds accounted for £16,788,048. These totalled £77,072,258, leaving £16,155,607 to be accounted for by cost of Government, and other Government services.

### Men, Money, Markets.

The Prime Minister, in his policy speeches, referred to Australia's

problem of development as bound up in three great essentials, men, money and markets, the greatest being, perhaps, markets. As regards production, these problems were not problems of markets; they were problems which lay inside Australia, not without.

There was danger of attention being diverted from real and immediate problems, if they were not confronted appearing to be antagonistic to stantly insisted on, even at the risk

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Covent Garden Market  
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Consignments of  
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New Zealand  
Fruits—

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dealt at length with the problems of finance, production and its costs, excessive Government expenditure, marketing of products, and the important question of Government versus private enterprise. He claimed that the time was ripe for less Government interference in business affairs, but for more efficiency in production and Government services, for decreased Government expenditure and lighter taxation.

Politics and finance, Sir Lennnon declared, became closely interwoven during the war. Problems which were

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Shipping Number 418.

larger policies which attracted by their comprehensiveness and high vision.

In Victoria, where there had been spent out of loan money in ten years £32,212,903 on soldier and closer settlement, advances to farmers, country water supply and country roads, the number of men engaged in cultivating, dairying and pastoral pursuits increased in the ten years to June, 1925, by 10,659. Surely this was a problem which must be carefully considered before embarking on further expenditure of loan money on land settlement.

Sales of ...

## Sulphate of Ammonia

steadily increase, and the reason is not far to seek. Efficient fertilisation is not now regarded as an expense. It is an investment. Efficient fertilisation cannot disregard the merits of sulphate of ammonia, and the conclusion one reaches in regard to its heavy sales is that orchardists and farmers are now putting their holdings on a better paying basis.



Sulphate of Ammonia literature posted gratis on request.

THE AUSTRALIAN SULPHATE OF AMMONIA PROPAGANDA COMMITTEE.

360 Collins Street, Melbourne.

### Production in Australia.

As to production in Australia, in 1913, agricultural, pastoral and manufacturing had an almost equal share in total production, with one-fourth each. In 1923-24 the share of manufacturing was greatest, with nearly one-third of the total, while agriculture had improved its position with 28.5 per cent. of the total. Pastoral and mining had decreased in importance; but dairying had shown a slight increase.

The problem in dairying was the educating of the dairyman to cultivate his land properly, to improve the standard of his herds, to feed them properly, and increase their productivity. Was there, he asked, the remotest connection between this problem and stabilisation schemes, export control boards, and bonuses? Were those who advocated such schemes true friends of the dairymen—were they not his enemies, because they diverted his attentions from the real problems?

### The dried fruit industry

was a glaring example of high capital cost and unbalanced production, caused by lack of foresight on the part of Governments in hastening production.

Markets were not to blame, and it was doubtful whether permanent re-

lief could be obtained in this direction, particularly if the Government assumed control.

Sugar was another example of unbalanced production—the better the harvest, the more for the Australian consumer, who had to pay a higher price to even up the losses on the quantity exported.

### Excess of Imports.

As regards manufactures, while there had been a gratifying increase in quantity production, claims for increased protection were continually being made.

So long as Governments continued to borrow money abroad, there would be an excess of imports over exports, no matter how high the tariff was raised.

The volume of imports required balance, and exports, after providing for interest, and other payments abroad, could not be controlled by Governments. It could be directed into channels by the tariff, but the only way its volume could be reduced was by reducing the volume of exports, which would bring disaster on everyone, because we were dependent on our export trade for our financial stability.

If conditions had reached a stage in Australia that demanded an increasing degree of Government interference; if we had got the conception

that progress could come from inhibitions, from the elimination or restriction of the more enterprising and efficient by the substitution of bureaucracy for private enterprise, then we had lost the virile spirit of our forefathers, and were being drugged into lethargy by false prophets.

### Soviet Example.

In concluding his address, Sir Lennon said "The tendency of international events is toward disentangling trade and finance from politics. Even in Soviet Russia a new decree was issued last November which modifies, if it does not actually abolish, the Government monopoly of trade. There is nothing in our situation to suggest that the time is not opportune for a similar movement in Australia. Quite the reverse.

Our self-reliance and enterprise, our pioneer spirit is in danger of being weakened by "spoon-feeding" at the hands of Governments.

As with an individual, so with an industry; it may grow fat by "spoon-feeding," but it will be flabby, not healthy and vigorous. Like Oliver Twist, it will "holler for more." Progress does not lie that way. It lies in the direction of grit and initiative and voluntary co-operation, free from the shackles of bureaucracy and the baneful influence of politics.



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on the markets of  
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FOR PROFITABLE  
RESULTS —  
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17 Johnston Street, Wellington  
Hellaby Buildings, Queen Street,  
Auckland  
And Dunedin

## The Effect of Defoliation of the Growth of the Tree.

(By F. Thomas, M.A., Bunyip, Victoria.)

**T**HE LONG DRY SPELL has greatly hastened the fall of the leaves from the Apple trees throughout the orchards of Victoria. Splashes of yellow are everywhere visible, and in all the hollows of the ground are great masses of dead leaves, which rustle and crackle underfoot. One cannot help wondering what effect this abnormal defoliation, so early in the season, will have upon the new buds upon which we have to depend for our next year's crop. Many orchardists prophesy that trees carrying anything but the lightest of crops will fail to produce buds that are likely to set in the spring.

We know that the tree gets its food supply from the roots, and the leaves. Through the roots it obtains

If we deprive any living thing of a part of its lungs and stomach, we cannot expect it to be healthy, and this explains the concern with which many orchardists are watching the leaves drifting down day by day.

These thoughts lend interest to the work of E. L. Proebsting, of the California Agricultural Experiment Station, who has lately carried out experiments on the relation of stored food to the cambial activity of the Apple by defoliation methods, and published his results in their journal, "Hilgardia."

To test the growth of the trees, very careful microscopic measurements were made of the thickness of the cambium in one-year-old twigs. The cambium is the layer of growing tissue just inside the bark. The inner part of it gives rise to the annual ring of new wood, the outer to the annual thickening of the bark.

Six-year-old Apple trees of the McIntosh variety were selected for the experiment. Four of the trees had all their leaves removed as soon as they appeared in spring. As new leaves developed they were also removed.

Another group of four trees was allowed to grow normally for a month, when the leaves were removed and the limbs kept bare. Four others had the leaves removed from half the tree on the same dates as those that were completely defoliated.

Ten one-year-old twigs were selected from each of these trees every week or two throughout the growing season; treated with alcohol and glycerine cut into sections and measured under the microscope. The thickness of new wood was thus accurately determined. The unit of measurement was 1/1000 of a millimeter, and is termed a micron.

It was found, as the result of many measurements that one-year-old twigs on the trees suffering complete defoliation for three months produced new wood 130 microns in thickness, those defoliated after a month's growth produced new wood 567 microns in thickness, while the normal check trees showed an increase of 913 microns.

Similar results were obtained on comparing the measurements of check and defoliated halves of trees of the same variety and age.

Another series of measurements showed that defoliation has much less effect on the length than on the thickness of the growing twigs.

It was clear from the whole series of experiments that the growth of new wood was dependent on the presence of leaves for its normal functioning. Without the co-operation of the leaves, little growth took place.

Attempts were then made to account for the cessation of growth by chemical methods. Twigs on the check and the defoliated trees were dried, ground to powder, and treated in various ways to extract (1) the sugar; (2) the starch; (3) the nitrogenous contents.

Strange to say, very little loss was noted in the quantity of sugar, starch, or nitrogen in the twigs of the defoliated trees. Lack of growth therefore does not seem to be due to starvation, and the author has to admit that several different theories, which still have to be tested, will fit the facts.

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**PROMPT RETURNS**

water, minerals like soda, potash, magnesium and iron, the soluble phosphates and nitrates, and other elements like sulphur and silicon.

Through the leaves it obtains the carbon that builds up the woody fibre of the trunk and branches, and in these leaves it elaborates the sugars, starches and gums that nourish the new season's buds. Chiefly through the stomata, or tiny openings on the under parts of the leaves the plant obtains the oxygen and the carbonic acid it requires, and therefore the leaves are often spoken of as the lungs of the tree.

Again, since it is mainly in the leaves that the crude sap is converted into starch and sugar, they may be regarded as the stomach of the plant.

### HAMBURG

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**Ph. Astheimer**

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Fruit Brokers . .  
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(GERMANY)

Established 1863.

Largest receivers of Australian,  
Tasmanian, and American  
APPLES.

Foreign Apples a Speciality.

#### For the Practical Man

there is, however, clear evidence that the leaves of our trees are all-important for its healthy growth, and that an early defoliation is to be guarded against, as far as possible.

More attention must be paid to irrigation, and every orchardist should make provision by a water catchment for these lean years.

In old-established orchard districts like Doncaster, every orchard has its dam, and other districts would do well to follow and profit by their experience.

From the day the Princess found the child Moses hid away in the bulrushes down to the smart sayings that fall like leaves from the forest of human thought, there is no word in ancient or modern language that will help humans more when you put it into practice than the word **kindness**. Kindness is the night dew that saves the Flowers of Friendship.—Silent Partner.





# THE "Sunrayseed" Courier

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### Government Nominee:

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H. D. Howie, Renmark, S. Aust.  
A. L. Johnston, Mildura, Vic.  
A. Yeates, Millendon, W.A.  
Secretary—R. Marx.

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J. M. Balfour (Chairman).

### Government Nominee:

E. Meeking.

### Growers' Representatives:

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E. T. Henderson, Mildura.  
A. Lochhead, Irymple.  
Secretary—A. D. Brown.

## SOUTH AUSTRALIAN DRIED FRUITS BOARD.

### Commercial Representatives:

L. N. Salter (Chairman).

### Government Nominee:

G. A. W. Pope.

### Growers' Representatives:

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H. G. Evans, Renmark.  
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E. J. Roberts, Irymple.  
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### Secretary:

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### Appraiser and Publicity Officer:

W. P. Caro.

## List of Agent's Distributing Prices for 1926.

All contracts for the sale of A.D.F.A. Dried Fruits by buyers shall, subject to all the Terms and conditions of the Association, be at the prices set out herein.

### Currants.

|                               | 10 Tons. | 100 Boxes. | One Box. |
|-------------------------------|----------|------------|----------|
| 4 Crown                       | 7½d.     | 75d.       | 7½d.     |
| 3 Crown (Australian Standard) | 6½d.     | 65d.       | 6½d.     |
| 2 Crown                       | 6½d.     | 65d.       | 6½d.     |
| 1 Crown                       | 6d.      | 6½d.       | 6½d.     |
| M.F. (For Manufacturers Only) | 5d.      | 5½d.       | 5½d.     |

### Sultanas.

|                               | 10 Tons. | 100 Boxes. | One Box. |
|-------------------------------|----------|------------|----------|
| 4 Crown                       | 10d.     | 10½d.      | 10½d.    |
| 3 Crown (Australian Standard) | 9½d.     | 9½d.       | 9½d.     |
| 2 Crown                       | 9d.      | 9½d.       | 9½d.     |

### For Manufacturing Purposes Only.

|                  | 10 Tons. | 100 Boxes. | One Box. |
|------------------|----------|------------|----------|
| 1 Crown Sultanas | 8½d.     | 8½d.       | 8½d.     |

### Lexias and Walthams.

|                               | 10 Tons. | 100 Boxes. | One Box. |
|-------------------------------|----------|------------|----------|
| 5 Crown                       | 7½d.     | 7½d.       | 7½d.     |
| 4 Crown (Australian Standard) | 6½d.     | 6½d.       | 7d.      |
| Muscats                       | 6½d.     | 6½d.       | 6½d.     |

### For Seeding Only.

|                                                                                    | 10 Tons. | 100 Boxes. | One Box. |
|------------------------------------------------------------------------------------|----------|------------|----------|
| 2 and 3 Crown Lexias                                                               | 5½d.     | 5½d.       | 5½d.     |
| Currants, Sultanas, or Lexias packed in 1lb. Cartons, 1½d. per lb. more than bulk. |          |            |          |

### Seeded Raisins.

|            | 10 Tons.     | 100 Boxes.    | One Box.     |
|------------|--------------|---------------|--------------|
| In Cartons | per doz. 8/3 | per doz. 8/4½ | per doz. 8/6 |
| Loos       | per lb. 7d.  | per lb. 7½d.  | per lb. 7½d. |

These Prices are for Adelaide, Melbourne, Sydney, Newcastle and Producing Centres, also Fremantle, Perth and Albany for Currants and Lexias.

For Brisbane, Fremantle, Perth, Albany, Hobart and Launceston, add ½d. per lb. to prices in every instance.

Other main ports in Queensland, not North of Townsville; and in West Australia, south of Geraldton, add ½d. per lb. to prices in every instance.

Cairns, Queensland; or Geraldton, W.A., add ½d. per lb. to prices in every instance.

Ports in Queensland, North of Cairns; and West Australia, North of Geraldton, add ½d. per lb. to prices in every instance.

## DRIED FRUITS STANDARD.

During March a meeting was held at Mildura, attended by representatives from South Australia, Victoria and New South Wales, to consider standards for the coming season. The standards were adopted on an examination of the Currants, Sultanas and Raisins submitted from a general sample of the season's output.

The standard is considered to be excellent regarding quality, color and appearance, noticeably superior to those of recent years. The cold dip system is deemed to be responsible for the improvement.

On the whole the opinion is expressed that the output of dried fruits this season will be one of the most satisfactory for many years.

**DRIED FRUIT CONTROL.**

The urgency for the passing of legislation in N.S.W., to control dried fruits, on the lines of the Acts of Parliament in Victoria and South Australia, was stressed at a large meeting of fruitgrowers at Leeton, N.S.W., recently by Messrs. J. M. Balfour, Chairman Victorian Dried Fruits Board J. B. Murdoch (S.A.), and L. McLeod, of Curlwaa (N.S.W.), Unless N.S.W. passed similar legislation there was danger of the Victorian and South Australian Acts lapsing in 1927. The total pack of dried fruits in 1925, for Currants, Sultanas and Lexias, was 37,786 tons, of which 25,323 tons were exported.

A committee was appointed to consult growers at Griffith and Yenda, and to report further.

**Tree Fruits.****New Season's Prices.**

For the information of growers, the following prices are published in full New season's prices for Tree Fruits have been declared as under:—

|                                          | 4 Crown. | 3 Crown. | 2 Crown. | 1 Crown. | Slabs. |
|------------------------------------------|----------|----------|----------|----------|--------|
| Apricots.— 10 Tons . . . . .             | 1/3      | 1/2      | 1/1      | 9d.      | 10d.   |
| 100 Boxes . . . . .                      | 1/3½     | 1/2½     | 1/1½     | 9½d.     | 10½d.  |
| 1 Box . . . . .                          | 1/4      | 1/2      | 1/2      | 10d.     | 11d.   |
| Whole Apricots—may be sold at Best.      |          |          |          |          |        |
| Nectarines.— 10 Tons . . . . .           | 1/-      | 11d.     | 10d.     | 8d.      | —      |
| 100 Boxes . . . . .                      | 1/0½     | 11½d.    | 10½d.    | 8½d.     | —      |
| 1 Box . . . . .                          | 1/1      | 1/-      | 11d.     | 9d.      | —      |
| Whole Nectarines—may be sold at Best.    |          |          |          |          |        |
| Peaches.— 10 Tons . . . . .              | 1/-      | 11d.     | 10d.     | 7d.      | —      |
| 100 Boxes . . . . .                      | 1/0½     | 11½d.    | 10½d.    | 7½d.     | —      |
| 1 Box . . . . .                          | 1/1      | 1/-      | 11d.     | 8d.      | —      |
| Pears (28 lb. Boxes).— 10 Tons . . . . . | 1/2      | 1/0½     | 11½d.    | —        | —      |
| 100 Boxes . . . . .                      | 1/2½     | 1/1      | 1/-      | —        | —      |
| 1 Box . . . . .                          | 1/3      | 1/1½     | 1/0½     | —        | —      |
| Pears (14 lb. Boxes).— 10 Tons . . . . . | 1/2½     | 1/1      | 1/-      | —        | —      |
| 100 Boxes . . . . .                      | 1/3      | 1/1½     | 1/0½     | —        | —      |
| 1 Box . . . . .                          | 1/3½     | 1/2      | 1/1      | —        | —      |
| Pears (7 lb. Boxes).— 10 Tons . . . . .  | 1/3      | 1/1½     | 1/0½     | —        | —      |
| 100 Boxes . . . . .                      | 1/3½     | 1/2      | 1/1      | —        | —      |
| 1 Box . . . . .                          | 1/4      | 1/2½     | 1/1½     | —        | —      |

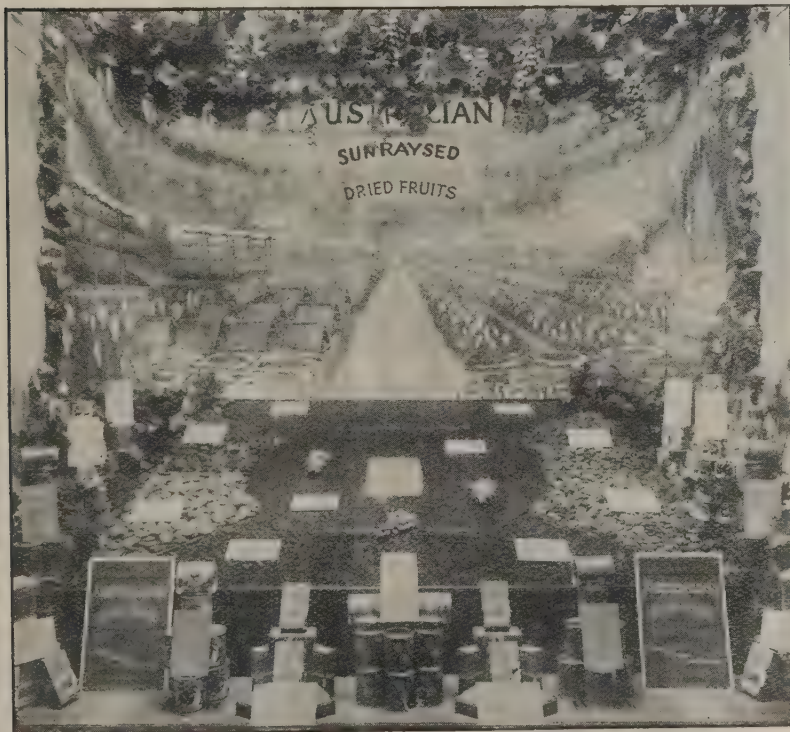
The above prices are for Adelaide, Melbourne, Sydney, Newcastle (Sydney and Newcastle till June 30, 1926), and Producing Centres, plus the usual additions to prices for shipment to other Ports, as per Terms and Conditions of Sale.

**Queensland.****QUEENSLAND FRUIT MARKET-  
ING.****C.O.D. Barrows Withdrawn.**

Reports to hand from Brisbane regarding the activities of the Committee of Direction in running fruit barrows (referred to in our last issue), indicate that practical difficulties have been experienced.

The "Daily Telegraph" reports that the Committee of Direction has now abandoned its scheme for selling fruit from barrows on the streets of Brisbane. The venture showed heavy losses.

**Banana Disease.**—It is understood that the Federal and the Queensland Governments will each contribute £500 towards the investigations on the disease in Bananas. Laboratory investigations are to be carried out by Professor E. J. Goddard, of Queensland.

**A.D.F.A. PUBLICITY.**

This handsome display appeared in the grocery window of the Army and Navy Stores, Victoria Street, Westminster, within a stone's throw of the House of Commons. A diorama and bunches of real Grapes complete a powerful sales medium.



## Tasmania.

Arsenic Scare. - Fruit Shows. - Seasonable Orchard Notes.

By Our Correspondent.

**T**HE SEASON CONTINUES dry, and it is evident that a fair percentage of the later ripening varieties will be of small size. In parts of the Huon some useful show-ers have fallen, and conditions are generally better than districts north of Hobart.

The picking and harvesting of the Apple crop are now at the peak period. Large consignments are being despatched weekly to mainland markets, and the scene on the Hobart wharves is a busy one.

The first overseas vessel carrying Australian fruit will arrive at London on March 25 (s.s. "Maloja"), the consignments being mainly Victorian and South Australian fruit. The whole industry is looking forward to the season being opened in a propitious manner, and will eagerly await the reports of the reception and sale of early varieties.

If everything goes smoothly, and fair returns are secured, there is every prospect of the Apple industry attaining its pre-war status. This is the first season since 1914 that we have had good crops of excellent quality fruit, together with sufficient vessels to lift them, and the main risks of carriage eliminated. The fruitgrower is becoming used to hard knocks, but is hopeful that no further bogies will be let loose, to the detriment of his market.

### Advertising Propaganda Abroad.

For some years an arrangement has been effected for the advertising of Australian fruit on overseas markets, whereby the grower and broker each contributed a small levy per case

to cover the costs of operation.

Owing to the constant representations from the various branches of the industry, the Commonwealth Government this season decided to contribute towards this effort on the pound for pound basis.

According to reports recently received, the National Fruit Federation had all plans prepared to carry out an extensive advertising scheme on similar lines to former years, when an intimation was received that the Commonwealth grant would not be available until the arrival of their publicity officer in June.

Representations are being made to the Prime Minister to reconsider this matter, especially that if any advertising propaganda is to be of any value it should be put into operation before the arrival of the first boats. The Australian Apple export season will be practically finished in June. It is difficult to follow the authorities' line of reasoning in this matter, especially as in consequence of the arsenic scare, the need of reassuring propaganda must be evident.

[Editorial Memo, 24/3/26.—The Federal Government has made £8,000 available for advertising at once.]

### Arsenic Scare.

Contrary to expectations, the arsenic scare in regard to Apples and pears exported to overseas markets is being kept very much alive, and fruitgrowers are beginning to wonder what is behind the propaganda that is still being carried on.

There is not the slightest doubt that, if this scare had not made its appearance, some thousands of bushels

of fruit would have been sold at a higher figure, and a feeling of resentment is becoming apparent, especially as the export Apple trade has been carried on without any ill-effects under precisely similar conditions during the last 20 years.

In order that the Tasmanian exports should not be prejudiced, any fruit showing spray marks has been carefully wiped before packing. In addition, regular samples have been drawn from the different vessels loading, and subjected to analysis. These have either proved free from arsenic or shown such infinitesimal traces as to be entirely negligible. In no case has the quantity per pound exceeded the hundredth of a grain limit.

Meanwhile the Australian consumer is eating apples direct from the tree without any ill effects, and in spite of the efforts of a few scaremongers who are airing many weird and wonderful theories through the "press," the demand is in excess of former years.

Whilst fully recognising the importance of supporting the policy of Imperial preference, it must be admitted that such is becoming difficult. A few seasons ago, the butter trade became involved in a "boric acid" controversy, now our fruits are under question concerning possible arsenic contamination. We are wondering what new scare may penalise our wheat or wool in future years, and also how the loan money, which has been expended on such primary industries, can be returned in the shape of exports!

### Conference of Ministers of Agriculture.

The conference of Ministers of Agriculture, which was to have taken place in Brisbane in April, is now postponed to June.

Amongst the important subjects listed for discussion are:—

# DENNIS & COOPER LTD.

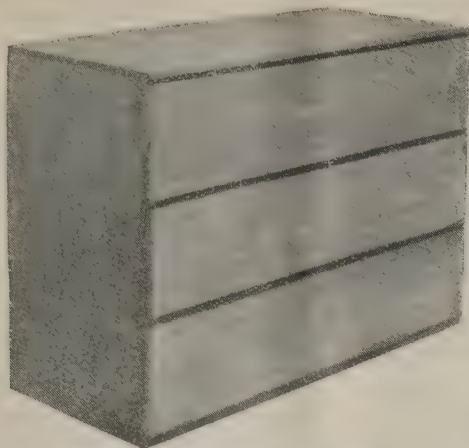
COVENT GARDEN, LONDON, ENGLAND  
Fruit Brokers and Commission Salesmen

FINANCIAL FACILITIES OFFERED

Make your Shipments of **APPLES** through

**BENDER & CO. PTY. LTD.**

4 Davey St., HOBART - 100 Elizabeth St., LAUNCESTON  
who will supply all information.



Australian Apple and Citrus Dump Bushel Case.

## SOFTWOOD CASES

(IMPORTED)

*Cheaper than hardwood if exported.*

*Cut to Australian Standard Sizes*

DUMP BUSHEL with one piece top and three equal piece side

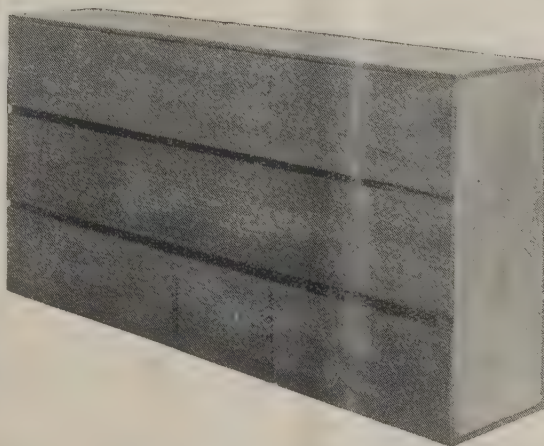
UPRIGHT BUSHEL with one piece top and three equal piece side

DRIED FRUIT CASE with one piece side and two equal pieces tops and bottoms

CANNED FRUIT with one piece side and two piece tops and bottoms

### SOME ADVANTAGES IN FAVOR OF IMPORTED CASES

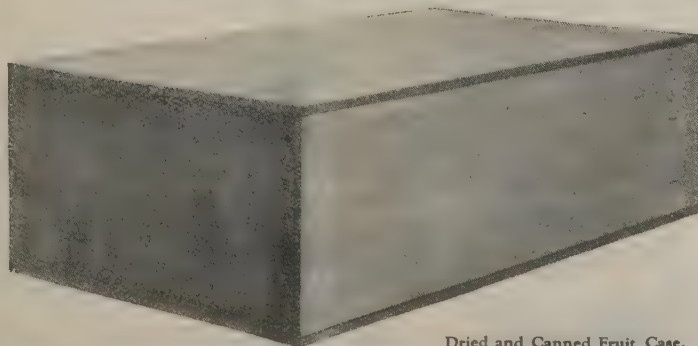
- (1) Full drawback of duty allowed on all cases exported.
- (2) 1/3rd less freight than on Hardwood cases.
- (3) 25% rebate on rail freight for full trucks.
- (4) All timber cut to exact sizes making it an easy matter to assemble a symmetrical case.
- (5) Every piece of timber fit and ready for use, thereby eliminating waste.
- (6) Can be supplied in shooks or made up and branded.



Upright Bushel Case with Centre Partition.

Particulars from the Largest Importers

## Overseas & Interstate Trading Co. Ltd.



Dried and Canned Fruit Case.

22 Market Street,  
Melbourne

Phone Central 9110

Also  
King William Street,  
ADELAIDE



The amendment of the Customs "plain" grade to a more practical basis of operation.

Uniform legislation in regard to dried fruits.

Grades for nursery fruit trees supplied for commercial planting.

Investigation towards securing a method of controlling the codlin moth without the use of arsenical sprays.

Development of overseas markets for Citrus fruits, and the question of compulsory export.

#### Young Australia League.

During early April a visit will be paid to this State of approximately 100 boys of the New South Wales Young Australia League.

In order to give effect to the educational feature of such visits, the principal representatives of the fruit industry have arranged for the party to visit the Derwent Valley, and obtain an insight into the methods of production and marketing of our Apple and Pear, and hop industries. The visit will be conducted and arranged by the State Fruit Expert, Mr. P. H. Thomas.

#### Fruit Shows for April.

The following shows will be held during the month:—

| Date.    | Association.                  | Place.    |
|----------|-------------------------------|-----------|
| April 3— | East Tamar Rural Producers... | Newnham   |
| " 5—     | Kingsborough Association...   | Kingston  |
| " 16—    | Huonville...                  | Huonville |
| " 24—    | Bagdad...                     | Bagdad    |

#### Director of Agriculture.

In accordance with the recommendation of Dr. Cameron regarding the re-organisation of the Department of Agriculture, applications have now been called for the position of Director. It is understood that an early appointment will be made, so as to put the Department on a more effective basis to carry out its functions during the coming season.

#### Fruit Fly.

In consequence of the representations of the Commonwealth Government to the Argentine Republic concerning the total embargo that was placed upon the importation of Australian fruit owing to the presence of fruit fly, it is reported that the Argentine authorities are sending a representative to thoroughly investigate the occurrence of the pest in the different States.

A visit has already been paid to New Zealand, which has been declared to be free of the pest. The fruit fly is not known to exist in Tasmania and South Australia. As it is probable that during the next few years the fresh-fruit trade with the Argentine will be again opened up, it is only fair that such unwarranted restrictions be removed.

## Apple Grading Regulations.

### Amendment of "Plain" Grade Desired.

The Tasmanian fruit industry, which is represented in its entirety by the State Fruit Advisory Board, insists that the grading regulations which were recently decided on at the Australian Fruit Council, should be adopted. These regulations have the support of the interstate fruit experts and the conference of Ministers of Agriculture.

Briefly, the present regulations provide for a (1) Special grade (i.e., super. fruit); (2) Standard, the ordinary average clean commercial grade, allowing 10 per cent. of blemish to provide for human error; (3) Plain—which is now termed the "piebald" grade; this allows 30 per cent. of fruit showing slight spot mark if mixed with 70 per cent. clean fruit; why the mixture? The ideal should be to put all the clean fruit into the standard grade and to allow the plain grade to contain apples which do not quite reach the "standard" specifications. The "plain" grade is also a commercial one, seeing that the spot markings on each apple must not, in the aggregate, exceed the size of a threepenny piece.

In practice the present "plain" (piebald grade) cannot be demonstrated by the packing instructors in the schools, nor can there be any adequate inspection on the wharf, for who is to say whether the percentage of slightly marked fruit is 30, 40, 50, or even a higher percentage.

The earnest desire is that the Commonwealth and State regulations shall be uniform. At present, for interstate trade Tasmania operates in the standard, special, and what is known as "C" grade. The latter is permitted to obtain 100 per cent. of slightly-blemished fruit—exactly what is requested in the amendment of the "plain" grade specification to replace the present piebald grade.

As soon as this detail is attended to the standards for interstate and overseas will be uniform, saving the growers much unnecessary trouble.

## HORTICULTURAL RESEARCH.

### £750,000 Allocated in U.S.A.

THE need for constructive horticultural research has been so frequently emphasised by leaders of Australian horticulture, that it is of particular interest to note what is being done by our cousins in U.S.A.

For the fiscal year beginning July 1, 1926, the U.S. Department of Agriculture appropriation estimates provide for the Bureau of Plant Industry £750,000, as compared with £776,215 for 1925. Among the items are:—

For investigations of plant diseases and pathological collections (including a plant-disease survey), £16,000.

For the investigation and improvement of nuts, £5,460; for the investigation and improvement of fruits, £30,800; for horticultural investigations, including the study of producing and harvesting truck and related crops, £17,600.

For investigating, in co-operation with State or privately-owned nurseries, methods of propagating fruit trees, ornamental and other plants, the study of stocks used in propagating such plants and methods of growing stocks (for the purpose of providing American sources of stocks, cuttings, or other propagating materials), £4,000.

For the work of the Arlington experimental farm, £5,443.

For investigations in foreign seed and plant introduction, including the study, collection, testing, propagation and distribution of rare and valuable seeds, bulbs, trees, shrubs, vines, cuttings and plants from foreign countries and from American possessions, £28,610.

For the purchase, propagation, testing and distribution of new and rare seeds, £7,320.

The Bureau of Entomology is allotted £21,440 for study of injurious and beneficial insects; for corn borer fund, £54,000; for Japanese beetle fund, £40,000; for Gipsy and Crowntail moth fund, £120,000.

To the Federal Horticultural Board is allotted £130,000, of which £75,000 is for general expenses of enforcing the Plant Quarantine Act.—"American Nurseryman."

Some very emphatic statements were made by Sir Lennon Raws, President of the Associated Chambers of Commerce at the recent conference in Sydney.

Australia's progress was being retarded by Government interference, stated Sir Lennon, and as a people we were in danger of losing our self-reliance and sturdy pioneer spirit.



GIBBS, BRIGHT & CO.—See Page XII

## Fighting Insect Pests in the Orchard.

### Caper Butterfly.

During the last few weeks these butterflies have been very plentiful throughout the Orange orchards. It is a black and white butterfly. It lays its eggs on the outside of the orange and the young larvae work into the orange. Spray thoroughly with arsenate of lead.

Scale Insects on Fruit Trees.  
See "Fruit World," March, 1926.

### Harlequin Bugs on Apples.

A number of orchardists are complaining that these destructive plant

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and Careful Attention**

CONSIGN YOUR FRUIT TO

**RULE & BEAVIS**

FRUIT EXCHANGE,  
SYDNEY, N.S.W.

A TRIAL SOLICITED.

Shipping Number, 80.

Estab. 1888

bugs are causing a fair amount of damage to Apples by piercing the skin and sucking the sap, which cause the Apples to become pitted. Spray with nicotine sulphate, black-leaf 40 or pine spray.

"Painted Apple Moth" and "Light-brown Apple Moth" on Yates Apples  
See "Fruit World," March, 1926.

### Cherry Borer in Loganberry Stems.

This insect, a well-known pest of Plum, Apricot, Cherry and other fruit trees has recently been found in Loganberry stems. To prevent the insects laying their eggs on the stems, use tar-impregnated water. When once the caterpillars are in the stems it is a difficult matter to reach them with any spray. Keep a lookout for holes in the stem, probe these with a piece of wire dipped in carbolic acid. Cut off badly-infested stems and burn same.

Bryobia Mite, Red Spider, Codlin Moth, Woolly Aphis.

See "Fruit World," March, 1926.

Our doubts are traitors,  
And make us lose the good we oft might  
win  
By fearing to attempt. —Shakespeare.

## Tommy and his tummie.

There was a pain in Tommie's tummie:

An awful, awful ache,  
That made him yell in Dreamland  
And painfully to wake.

"Go, Daddie," cried his mother, then,  
"Phone good old Doctor Jake  
To hurry up and come at once.  
Be quick, for goodness sake!"

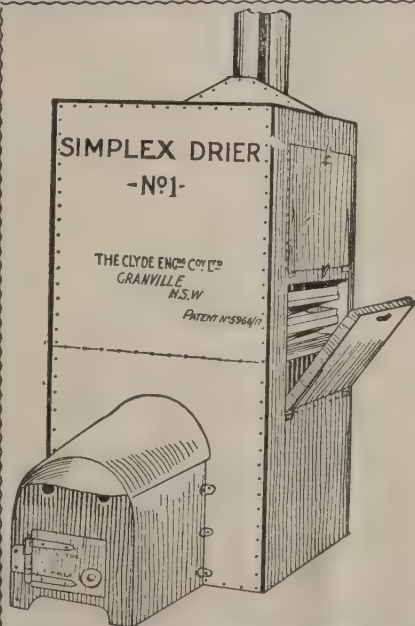
The doctor came and questions asked,  
And felt Tom's pulse. "No fake.  
He's sick all right, and now he'll have  
Some nasty stuff to take.

"He needs some oranges, this boy,  
Not candy, nuts and cake.  
Cut these all out and give him fruit;  
A diff'rence it will make."

Tom took this wise prescription  
Of good old Doctor Jake.  
And ev'ry day it's oranges  
Instead of candy—cake.

He eats. So now he's well and strong.  
No more his parents wake  
To hear him howl and have to send  
For wise old Doctor Jake.

—R. M. Fletcher Berry,  
in "Florida Grower."



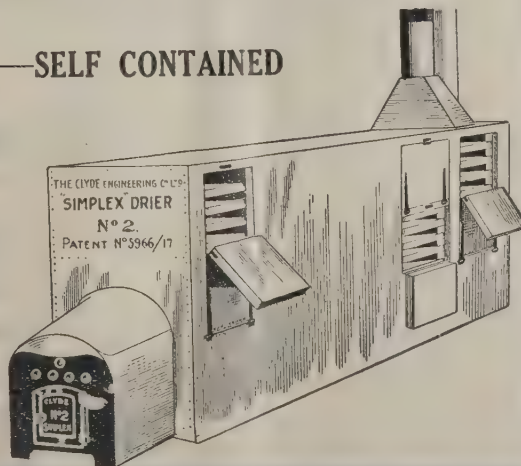
# The Clyde Simplex Driers

**For Drying  
Fruit, Vegetables and other Products**

**NO MORE WASTE FRUIT OR VEGETABLES**

**SIMPLE — SELF CONTAINED**

Made in Sizes to suit  
**Householders  
Small Orchardists  
or  
Large Factories**



**The Clyde Engineering Co. Ltd.  
GRANVILLE, N.S.W.**





## Karswood Poultry Products

Have the Greatest Sale of Any Poultry Foods.

**T**HIS is a big statement. The justification for it is the fact that it is true. Karswood Poultry Products are packed in packets, tins and bags, and in one year the net sales of Karswood Poultry Products only, reached the stupendous figure of nine million, three hundred and sixty-three thousand, seven hundred and sixty-six (9,363,766) units.

What stronger proof of the universal demand for Karswood Poultry Products is there than this? There is none, for the simple reason that the sales stated are overwhelmingly tremendous.

Of a certainty there must be a solid and definite reason for this. There is—the fact that Karswood Poultry Products are what they are claimed to be. They are scientifically and hygienically prepared, and everything is subjected to a rigorous test before any suggestion of a claim on its behalf is made. Karswood Products are true to label. We reiterate they are what they are claimed to be, and they do their job as it is stated they will.

### Everyday Practical Tests Prove the Claims of "Karswood."

Though in Australia no definite egg-laying contests have been held to prove the claims of Karswood, private practical tests are daily being made by hundreds of "back-yarders" and poultry keepers, with the result that there is a general unanimity of opinion regarding the worth of Karswood as a poultry food- tonic and aid to egg production. Below we quote a few of the many testimonials received, some very brief, others lengthy, but all possessing one common characteristic belief in Karswood through practical tests.

### "25 Eggs a Day from 29 Birds."

"I have been using Karswood Poultry Spice for some time, and find the results everything to be desired, and have recommended it to quite a number of poultry breeders. At present I have 29 hens, and have an average of 22, 23 and 25 eggs a day since using your spice.

Yours faithfully,

Miss L. DUREAU.

243 Riversdale Rd., Auburn, N.S.W.

### "40 to 50 Eggs Daily from 65 Hens."

This fine performance is definitely attributed to the use of "Karswood" Poultry Spice, and one can easily understand the enthusiasm of the testimonial which Mrs. Jackson sent along, and which we have pleasure in quoting:—

Dear "Poultry,"—

I was much interested in a letter from a Queensland correspondent re feeding "Karswood" Spice to pullets, and thought my own experiences might be helpful. I began to feed "Karswood" to my chicks at six weeks old, as an experiment, having heard it always very highly recommended in England. My chicks have given no trouble in rearing, and commenced laying from 4½ to 5 months of age, a good-sized egg with no "pigeon" eggs among them. They are laying well on a simple mash of two-parts pollard and one-part bran, with wheat for evening grain—and now, whilst my hens are moulting I give them an extra mid-day mash to keep them in heart. I have refrained

from any outlay in ready mixed mashes or meatmeal, etc., my one extravagance has been "Karswood" Poultry Spice, and they get it regularly every morning according to the directions, and I am sure it more than pays for its cost. From 65 hens, with which I commenced, I have been getting from 40 to 50 eggs daily, and have reared 200 pullets. I give Epsom Salts and Sulphur alternately every third morning. They are kept on free range as we have an orchard.

Yours, etc.,

(Sgd.) Mrs. ELSPETH JACKSON.

"Sunnyridge" Orchard.

### "Make This Test."

Go to your local grocer, store-keeper, or produce dealer. Get a 1/- packet of Karswood Poultry Spice, then give it to half-a-dozen of your birds in accordance with the directions on the packet. Do not expect immediate results, Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

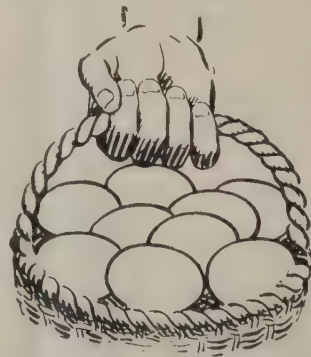
### Note the Economy.

- 1/- packet supplies 20 hens for 16 days.
- 2/- packet supplies 20 hens for 32 days.
- 13/- (7lb. tin) supplies 140 hens for 32 days.

### Supplies.

Karswood Poultry Spice is obtainable from all stores and poultry food suppliers at the following standard prices:—

| Packet               | Price |
|----------------------|-------|
| ½ lb. packet . . . . | 1/-   |
| 1 lb. . . . .        | 2/-   |
| 7 lb. tin . . . . .  | 13/-  |
| 14 lb. . . . .       | 25/-  |
| 28 lb. . . . .       | 28/-  |



If your local dealer cannot supply you, write direct to Messrs. Henry Berry & Co. Pty. Ltd., 380 Collins St., Melbourne, adding postage (6d. on half-pound packets and 9d. on one-pound packets)---to above prices.



## Poultry Notes

### Hints for April.

THE selection and mating of breeding stock are most important work this month, writes Mr. Jas. Hadlington, N.S.W. Government Poultry Expert, in the "Agricultural Gazette." To those who commence hatching in June, the advisability of having the hens or pullets selected in the breeding pens by the first of June will be obvious. The male birds might be put in right away, or, if desired, a week or two later. Early mating is most desirable, because, while fertility might be expected in a few days after mating, so short a period is not to be relied upon, especially after long separation.

There is no necessity for the separation of the sexes except during the moulting period. There is much misunderstanding on questions of fertile versus infertile eggs for market, but for all practical purposes no concern need be felt in regard to this matter.

### Chicken-pox Season.

This is the season of the year when chicken-pox is usually prevalent. This disease is one of the afflictions that poultry-farmers fear. Not so many birds die from it as is sometimes alleged; but the effect on a flock of pullets at this time of the year is disastrous owing to the fact that if they have come on to lay they will at once stop, and if they have not, the disease will retard them for some weeks to come.

All the cases that have come under notice have been of the lightest description; in fact, one would have had to look closely into the flocks to find the disease. The point is, that if the disease had caught the birds unprotected a very different tale would have been told. Instead of the disease appearing with a few innocuous eruptions on the comb and wattles, the whole of the fleshy surface of the birds' heads would have been a mass of sores. Such a condition is due to the irritation of the eruptions having been so great that the birds have scratched themselves; these sores may spread to the eyes, so that the birds are unable to see. It is this that brings about death when it occurs in

this disease, starvation rather than the disease itself being the real cause.

The main thing for such as have unfortunately got this disease into their flocks is to make an effort to dry up the sores and allay the irritation. For this purpose there is nothing better than tincture of iodine, used as a paint, with which the sores are lightly touched. Where the sores have got into the eyes the iodine is too severe, and ordinary laundry blue can then be used with good effect.

Chicken-pox is a feverish disease, which, apart from the eruptions, lowers the vitality. Recovery will be hastened by the administration of a tonic, Douglas mixture being one of the best for the purpose.

### How to Make Douglas Mixture.

Take four ounces of sulphate of iron and four ounces of Epsom salts; dissolve in one gallon of boiling water; let it cool, then add half an ounce of what is sold by the chemist as dilute sulphuric acid.

This is "stock" or concentrated mixture, which must not be given to the birds in this form. Bottle the mixture in a stone or glass (not metal) vessel, label it "poison," and put it away. Two table-spoonsful of this mixture added to each gallon of drinking water on three to five days per week over a period of three or four weeks will be found one of the best poultry tonics known. It is cheap and easily made. The quantity advised is practically harmless to ordinary iron or galvanised drinking vessels, buckets, etc.

Care is necessary in using sulphuric acid so as not to get it on the skin, which it will burn severely, and a glass stoppered bottle is necessary to contain it.

## Beekeeping

### The Care of Honey.

THOUGH liquid at the time of extracting, it is not long before movement and change of temperature cause extracted honey to become solidly granulated (states a Canadian departmental publication). One frequently hears granulated honey condemned as adulterated. This is entirely wrong. Though solid, gran-

ulated honey is in no way inferior to the liquid form; in fact, many prefer it granulated. It may, however, if desired, be quickly brought back to the liquid form by immersing the honey container in hot water. Care must be taken that the temperature of the honey does not exceed 150 deg. Fah., otherwise loss in flavor will occur.

Honey is a concentrated solution of several sugars in water, besides which there is a small percentage of other food elements. These latter elements give it its aroma and flavor. The sugars in this solution are cane sugar and invert sugar—the latter a mixture of grape and fruit sugar—and their ratio to water is approximately five to one.

As a food, honey is a valuable energy producer, since sugar is its principal constituent, and it is also a wholesome, natural sweet. As it is a highly concentrated sugar solution, it will, with proper care, keep well for a long period. One must remember, however, that it will absorb moisture readily, and that if much moisture is absorbed, fermentation will follow. It should be stored where the air is fairly dry and care taken to see that the cover of the container is tightly closed. Honey should never be placed in a refrigerator.

### Prevention of Robbing by Bees.

Every precaution should be taken to prevent robbers getting a start in the apiary. Robbing may be caused by exposing combs too long when manipulating the hives, by careless feeding, and by the presence of weak and queenless colonies. These latter should not be tolerated, and the other causes can be obviated by care and attention.

On no account should combs be exposed for long intervals, and if feeding has to be undertaken it should be deferred until late in the day. The excitement caused by feeding attracts other bees, and once they have tasted of the forbidden sweets they will continue to molest the hives for many days. As soon as robbing is detected it is far the best plan to postpone all operations in the apiary, and the entrances to the hives should be contracted at once.

If a colony is in danger of being robbed it may be saved by piling wet grass in front of the entrance. Robbers are less likely to enter a hive so protected. Very little trouble, however, will be experienced by robbing if it is not allowed to get a start; prevention is the best plan in all cases. On no account spill syrup near the hives; do not leave combs lying about, and try to avoid weak and queenless colonies.



## Orchard Manuring.

### An Interesting Method.

IN a current publication, Dr. A. D. Shamel, the Californian whose careful studies in bud variation have earned him a world reputation, draws attention to an interesting method of applying stable manure which has recently been adopted with much success in several orchards in the southern part of his State.

The method, states the N.S.W. Department of Agriculture, consists of opening deep trenches, forking the manure into them, then covering over again. The furrows, which are usually eight to ten inches deep, though sometimes 14 inches, are made with what is called a broad-furrow plough, which somewhat resembles the delvers used on irrigation areas in New South Wales. The trench is both wide and deep, and is capable of containing quantities of manure. Covering is effected by drawing an implement resembling a broad V over the ground so as to fill the trench in again.

In orchards where cross-cultivation is practicable, the best method appears to be to run the furrows at right angles to those of the previous year, but it is also found advisable to change the location of the furrows somewhat each alternate year by opening them up on one side of those previously made.

### A Useful Corrective.

The method is especially useful where alternate irrigation and cultivation have set the soil hard, and where continual cultivation to the same depth has tended to the formation of a plough-sole. The opening up of these impervious layers of soil, permitting the percolation of water and air, is of undoubted benefit to the soil.

In a number of instances the cross furrows have disclosed that the manure of the previous season has not fully decomposed, while in sandy porous soils the buried manure has been found to be largely, if not completely, rotted away.

It has been observed by Dr. Shamel that the area where the manure was buried has become filled with a mass of light-colored and actively growing feeding roots. Often the only evidence of the buried manure is the darker color of the soil mass as contrasted with the lighter color of the unmanured soil surrounding the furrow-manure areas. In such instances the improved moisture conditions in the decomposed manure zone are apparent, both from the appearance and the feel of the soil.

### The Amount of Manure.

The amount of manure applied depends upon the age and condition of the trees, the kind of manure and its

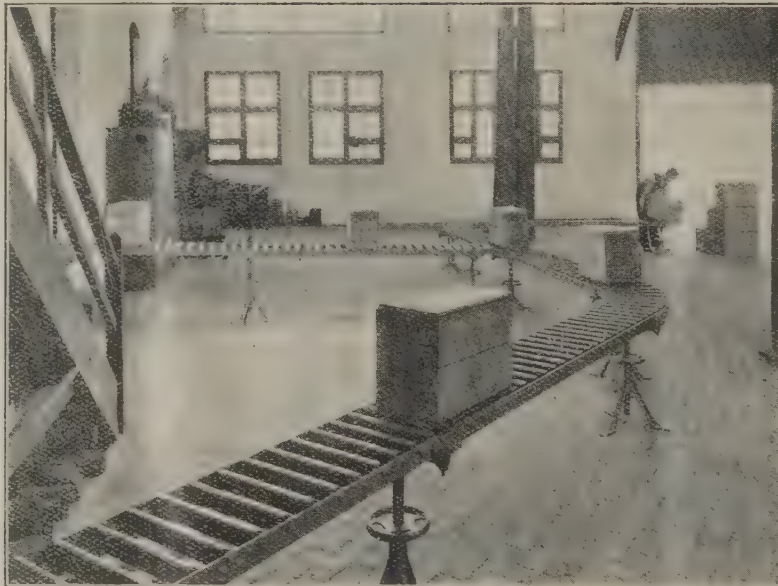
condition, and other cultural circumstances. Generally, five cubic feet of stable manure per tree for young bearing trees and ten cubic feet per tree in the older bearing orchards have given excellent results. In some instances commercial fertilisers have been added to the furrows along with the manure, but it is more usually broadcasted after the furrows have been closed in—where it is used. The furrow-manuring is usually done in the late summer or fall, though a number of cases were found where it was done during the winter and early spring.

The improvement in the tree condition following the practice has been notable, and much superior to the effects of the method of broadcasting manure and ploughing it under.

"It seems probable that one of the important reasons for improved tree conditions in most furrow-manured orchards is the breaking up of the plough-soles, and the keeping of these areas open through the action of the trenched and buried manure, thus providing for better soil moisture and soil aeration conditions."

The method is, of course, practicable where animals are stabled in the winter, and where large quantities of manure and bedding therefore become available, but it is not without its interest in this country.

FRUIT GROWERS

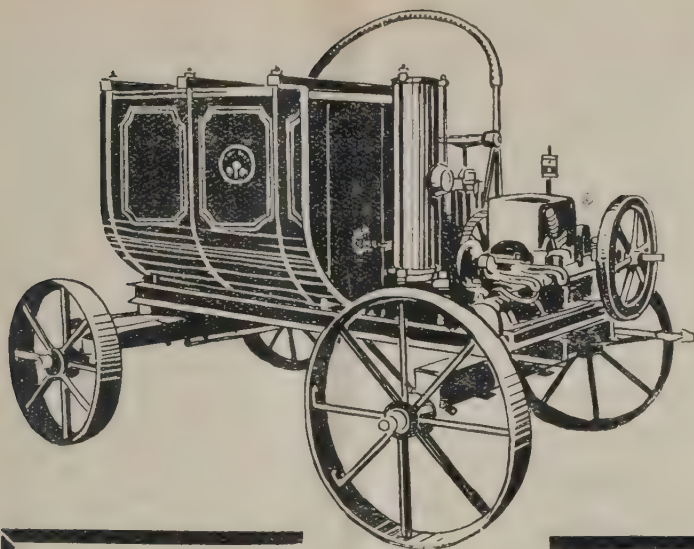


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**A WINNER!** The Sprayer that sets new standards—the Sprayer that will do its job thoroughly. The Sprayer that possesses additional advantages—that makes for greater efficiency.

Our entire organisation stands behind the proposition.

*Send for Literature and Particulars of this Motor Sprayer*

It is impossible to touch on more than a few of its features here.

**VALVES.**—The only Pump with outside Valves. These can be exposed in a moment, and adjusted whilst the engine is working. Bronze Balls sitting on reversible seats.

**CYLINDERS** are porcelain lined. This means long life and resistance to the action of chemicals.

**ALL STANDARDISED PARTS.**—Replacements are therefore easy, quick, and inexpensive; in fact, repairs can be effected by anyone without trouble.

**PRESSURE REGULATOR.**—A most wonderful feature. When the pressure is reached the strain on the engine is released. Saves wear and tear.

**OTHER IMPORTANT FEATURES.**—Special Plunger, that requires no packing. Detachable Strainer. Large Air Chamber. Well made Vat, Dependable Hose, &c.

Power is supplied by High-grade 2 h.p. Petrol Engine, renowned for dependable power, easy running and low fuel cost.

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In charge of a Specialist in all classes of spraying, pumping and irrigation problems is at your service. We are fully equipped to render expert advice on all problems.

## **WE CARRY STOCKS OF**

Sprayers—both Motor and Hand. Spraying Pistols. Pumping, Irrigation Machinery, and McDonald Imperial "Super-Diesel" Oil Engines. Catalogue, &c., mailed to your address.

Write us, supplying full particulars of your difficulties and needs. Set out your requirements, and we will supply information promptly—also submit quotations where required.

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# The Fruit Trade

Market Reports and News Items.

**REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS, Advertising in this Journal.**

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Greenberg, S. & M., Fruit Markets.  
Jenkins, John, Fruit Exchange.  
Louey Pang & Samuel Wong Ltd.,  
Thomas St., Haymarket.  
Rule & Beavis, Fruit Exchange.

### VICTORIA.

### Melbourne.

Coastal Farmers' Co-op. Society, Western Market.  
Colombie, H. G.  
Cave F. & Co., Melbourne.  
Davis, J., Western Market.  
Dennys, Lascelles Ltd.  
I.F. & M. Co. Ltd.  
Lister, G., Western Market.  
Mills, A. & Sons, Western Markets.  
Mills, J. B. & Co., 9 Queen St.  
Mumford, J. G., 449 Flinders Lane.  
Pang & Co. Ltd., H. L., Little Bourke Street.  
Silbert, Sharp & Davies, Western Markets.  
Stott & Son, T., Western Markets.  
Tim Young & Co., Western Market.  
Vear, F. W., 49 William Street.  
Wade & Co., H. M., 471 Flinders Lane.  
Woolf, G., Western Market.

### QUEENSLAND.

### Brisbane.

Barr, A. S., Fruit Exchange.  
Collard & Mackay, Fruit Exchange.  
Cooksley & Co., Fruit Exchange.  
Finlayson & Son, Fruit Exchange.  
Geeves, H. V., Fruit Exchange.  
Robsons Ltd., Fruit Exchange.  
W. J. Whitten & Co., Fruit Exchange.

### TASMANIA.

### Hobart.

Jones & Co. Ltd., H., Fruit Exporters.  
Port Huon Fruitgrowers' Assoc.  
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### Launceston.

Bender & Co. Pty. Ltd., 110 Elizabeth Street.

### WEST AUSTRALIA.

### Fremantle.

Simper, H. J. & F. Ltd.

### SOUTH AUSTRALIA.

### Adelaide.

Silbert, Sharp & Bishop Ltd.

### NEW ZEALAND.

### Auckland.

Radley & Co. Ltd., Fruit Auctioneers.  
Turner & Growers Ltd., City Markets.

### Dunedin.

Co-operative Fruitgrowers' of Otago Ltd.  
Paterson, Thos., & Co., Vogel Street.  
Reilly's Central Produce Mart.

### ENGLAND.

### London.

Bradnum, Jas.  
Dennis & Cooper Ltd.  
M. Isaacs & Sons Ltd.  
Jacobs, E., & Sons, Covent Garden  
Joel, R., & Sons, 16, 17, 20 Russell St., Covent Garden.  
Margetson & Co. Ltd., Covent Garden.  
Monro, Geo., Ltd., Covent Garden.  
Poupard, T. J., Ltd., Covent Garden.  
Ridley, Houlding & Co., Covent Garden.  
Springer, Barney.  
Swann & Co., 3 Salter's Hall Court.

### Bull.

White & Son Ltd.  
B. & J. Shaw.

### Bristol.

Bristol Fruit Brokers Ltd.

### Liverpool.

Adam, James, Son & Co., 1 Temple Court.  
MacGeorge & Jardine.  
Covenry.  
Boswell Bros. & Davis.

### Manchester.

North of England Fruit Brokers Ltd.  
—Australian Agent, N. V. Wade, 8  
Bridge St., Sydney, N.S.W.

### Southampton.

Bristol Fruit Brokers Ltd.

### Newcastle.

B. & J. Shaw.

### Cardiff.

Connolly, Shaw & Co.

### WALES.

### Glasgow.

Russell, Turnbull & Co.

### SCOTLAND.

### Dublin & Belfast.

Connolly, Shaw & Co.

### IRELAND.

### Amsterdam & Rotterdam.

Algemeene Vruchten Import Maatschappij.

### Copenhagen.

Kobenhavns Fugtauktioner.

### DENMARK.

### Bremen.

Fruchthandel, Gesellschaft.

### Cologne.

Algemeene Vruchten Import Maatschappij.

### Hamburg.

A.heimer, P. H., & Son., Fruchthof.  
Algemeene Vruchten Import Maatschappij.  
Lutten, J. H., & Co., Hamburg.  
Stier, Aug., Fruchthof, Reps. J. B. Mills & Co., 9 Queen St., Melbourne.

## British and Australasian Market Reports.

### AUSTRALIAN FRUIT IN ENGLAND.

#### First of 1926 Sales.

Mr. H. G. Colombie advises having recently received a cable from his principals, Messrs. B. and J. Shaw, Hull, England, March 29, as follows:—

S.S. "Largs Bay." — Victorian Apples—Jonathans (according to color), 14/- to 16/3; Cleos., 16/6 to 18/-; Dunns and Munros, 15/- to 16/3; Gravensteins, 13/- to 14/6; others, 10/- to 13/-. There is a good demand.

#### Great Britain.

London (13/2/26).

The following are the prices ruling at Covent Garden, as published in the "Fruit, Flower and Vegetable Trades Journal," 13/2/26:—

Apples.—English—Bramley, 5/- to 8/- sieve; Newton Wonder, 5/- to 7/-; Lane's, 5/- to 6/-; Wellington, 4/- to 6/-; seconds (various), 1/6 to 2/6; Nova Scotian—Fallawater (1's), 22/- to 24/- per barrel; (2's), 18/- to 18/-; Domestic, 17/- to 20/-; Golden Rus-

set, 1's and 2's, 30/- to 35/-; Baldwin, 1's and 2's, 18/- to 22/-; Stark, 1's and 2's, 17/- to 20/-; York Imperials, 30/- to 34/-; British Columbia—Jonathan, 12/- to 13/- per case; Canadian, Ontario—Greenings, 20/- to 26/- per barrel; Baldwin, 20/- to 24/-; Washington—Rome Beauty, Ex F. and F., Spitz, Winesap, 10/- to 12/- cases; Newtowns, 13/- to 15/-; Bananas.—Fyffe, 11/6 to 22/- crate; Hoya, 16/- to 23/-; Z Z, 14/- to 21/-; Grapes.—English Colmar, 1/9 to 4/6 per lb.; Belgian Colmar, 1/9 to 2/6; Almeria, 7/- to 8/- per doz. lbs.; Lemons.—Messina (300's), 20/- to 25/- per case; (150's), 10/- to 12/- per half case; Nectarines.—South African, 5/- to 10/- per box; Oranges.—Denia and Valencia (240's), 30/- to 55/-; (300's), 20/- to 35/-; (360's), 17/6 to 22/6; (504's), 17/- to 20/-; Jaffa, 17/6 to 22/- per case; Seville Sours, 15/- to 18/- per half chest; Palermo Bitters, 160's, 200's, 240's, 10/- to 12/-; Murcia Blood (300's), selected, 20/- to 25/-; (360's), 15/- to 20/-; Mandarins—Valencia, silver paper (50m/m), 1/- to 1/9; (55m/m), 1/3; (60m/m), 1/9; (65m/m), 1/9; Algerian, 6/-; Peaches.—South African, 5/- to 12/- per box; Pears.—South African—Clapp's Favorite, 3/- to 4/- per box; Bon Chretien, 3/6 to 5/-; Beurre Hardy, 4/6 to 5/6; Louise Bonne, 5/- to 6/-;

Liverpool (27/1/26).

Messrs. J. C. Houghton and Co., of Liverpool, report under date 27/1/26:—

American Barrel Apples.—Virginian—York Imperial, 22/- to 35/6; mostly, 30/- to 34/-; Albemarle Pip, 24/6 to 35/-; Ben Davis, 22/- to 24/-; Maine and Boston—Baldwin, 8/- to 15/-; best, 17/6 to 26/6; Stark, 10/9 to 20/6; Ben Davis, 14/- to 25/-; Western New York—Baldwin, 9/6 to 17/-; best, 19/- to 24/-; Greening, 14/6 to 20/-; best, 22/- to 30/6; Nova Scotian Barrel Apples—Golden Russet, 10/6 to 26/-; Stark, 8/6 to 17/-; Baldwin, 5/3 to 21/-; Canadian Barrel Apples—Cranberry, 14/- to 26/-; G. Russett, 14/6 to 26/6; Ben Davis, 10/3 to 22/6.

#### New South Wales.

Sydney (24/3/26).

Mr. F. Chilton, City Fruitmarket, reports under date 24/3/26, as follows:—

The demand up to recently has been very good generally, but heavy rain and cooler weather are now having the effect of dulling the market, and prices for Apples especially, are likely to ease.

Small-sized Apples and Pears are extremely difficult to sell, and unsat-

isfactory prices must be expected for this class of fruit on the Sydney market while heavy supplies continue to come forward.

Lemons, Tomatoes and Passion-fruit are unusually scarce and dear.

Queensland Fruits.—Bananas, 16/- to 32/- per case; Pines, smoothleaf, 9/- to 13/-; New South Wales Fruits.—Bananas, 16/- to 34/-; Lemons, 18/- to 30/- per bushel case: eating Apples, Jonathans, etc., 7/- to 12/-; cooking Apples, green varieties, 6/- to 9/-; Pears, W.C., 7/- to 12/-; Quinces, 4/- to 8/-; Peaches, 3/- to 5/- per half case; Passions, 8/- to 20/-; Tomatoes, 4/- to 12/-; Plums, dark, 2/6 to 7/-; Grapes, Black Muscat, 8/- to 14/-; White Muscat, 8/- to 14/-; White Sherry, 4/- to 8/-; Victorian Fruits.—Apples, Jonathan, etc., 7/- to 11/- per bushel case; Lemons, 16/- to 30/-; Pears, William, 7/- to 12/-; Peaches, 6/- to 9/-; Tasmanian Fruits.—Apples, Alf., 6/- to 8/-; W.P.M., 7/- to 9/-; Jon., 7/- to 11/-; F.C., 7/- to 9/-; D.C., 6/- to 8/-; Pears, G.B., 3/6 to 6/- per half case; B.D.C., 3/- to 4/6; B.B., 3/- to 5/-; W. Cole, 4/- to 6/6.

#### Victoria.

##### Melbourne.

The following are the prices ruling at the Western Market:—

Grapes, special Waltham, 10/- to 13/- per case; standard, 8/- to 10/-; special Gordos, 8/- to 12/-; standard, 7/- to 9/-; Tomatoes, special, 9/- to 11/-; standard, 6/- to 8/-; Apples, special Jonathan, 8/- to 10/-; standard, 5/- to 7/-; cookers, 4/- to 6/-; Pears, dessert, 7/- to 9/-; standard, 5/- to 6/-; Peaches, special yellow clings, 5/- to 6/-; standard, 3/- to 4/-; Lemons, special, 12/- to 14/-; standard, 8/- to 10/-; Pineapples, Queen, choice, 10/- to 13/-; Bananas, choice, 26/- to 30/-; special, higher; others, from 20/- to 22/-.

#### Queensland.

##### Brisbane (23/3/26).

Apples, eating, prime, 10/- to 12/-; others, 3/- to 6/6 per bushel case; Lemons, prime, 5/- to 8/6 per half bushel case; others, 3/6 to 5/-; Peaches, prime, 4/- to 4/6 per case; Pineapples, rough leaf, prime, 12/- to 14/-; others, 7/- to 11/-; smooth leaf, prime, 5/- to 7/-; others, 3/- to 5/-; Plums, prime, 6/- to 6/6; others, 4/- to 5/-.

#### South Australia.

##### Adelaide (20/3/26).

Apples, eating, 6/- per case; cooking, 3/-; Bananas, 30/- to 32/-; Blackberries, 4/- per doz. lbs.; Figs, 10/- case; Grapes, dark, 9/-; Lemons, 10/-; Oranges, common, 10/- to 12/-; Navel, 14/-; Peaches, 9/-; Pears, eating, 8/- to 10/-; cooking, 4/- to 5/-.

#### Western Australia.

##### Perth (20/3/26).

Apples, Jonathan, best dumps, 5/6 to 9/-; flats, 5/- to 6/6; Dunns, best dumps, 6/- to 9/-; Cleopatras, best dumps, 5/- to 8/-; flats, 4/- to 6/-; Pears, Bartlett, dump, 6/- to 9/6; flats, 6/- to 10/6; Plums, 9/- to 15/-; Peaches, 7/- to 14/6; Oranges, dump, 9/- to 13/-; flats, to 12/-; Lemons, flats, 5/- to 7/-.

#### Tasmania.

##### Hobart (13/3/26).

Apples, St. Law, choice, 7/6 to 8/2; good, 6/- to 6/8; C.O.P., good, 5/6 to 6/-; medium and small, 2/6 to 4/9; Gravenstein's, good, 5/6 to 6/6; medium, 5/-; Alex., choice colored, 5/10 to 6/3; N.Y.P., fair, 6/-; Alf., fair, 4/- to 5/-; W.P.M., good, 6/- to 6/6; Jon., medium, 4/6 to 6/-; Delicious, 7/-; B.O., fair, to 4/3; D.C., 2/6 to 4/6; P.A., 4/-; L.S., fair, 5/- to 5/6; Pears, W.B.C., good, 5/- to 5/6; G.B., good, to 7/8; Fertility, dull, 2/6 to 3/8; S.B., 4/- per case; Peaches, 6/7 to 7/9 per half case.

### Citrus Canker

#### How They Fought it in U.S.A.

##### Some Big Figures.

"A Citrus canker outbreak in Florida some 10 years ago caused such a condition in that State, that the Bureau of Plant Quarantine and Pests Control and the California Department of Agriculture are constantly trying to prevent a further occurrence, states "Citrus Leaves," U.S.A.

At the time of the outbreak it was decided that eradication was the only method, and the total cost of this effort, up to June 30, 1924, has involved an expenditure of £356,000, which does not include the value of trees infected and non-infected, which were destroyed in the course of the campaign. Large as this sum is, it is insignificant when compared with the value of the industry which has been saved.

Conservative estimates of the values of citrus plants in Florida place the figure at £52,084,000. The Citrus crops of 1923-24 amounted to 20,000,000 boxes. There is no question but that this large industry has been saved through the joint efforts of the State Plant Board and the U.S.A. Bureau of Plant Industry.

From May, 1914, to June 30, 1924, there were destroyed, as being infected or exposed to infection, 252,024 Citrus grove trees, and 33,062,785 Citrus nursery trees, a conservation value of which would be nearly £2,291,666, estimating the value of a grove tree to be £5/4/-, and a nursery tree to be 6/3.

### Stop Press News

#### FRUIT CANNING INDUSTRY.

The proposed Commonwealth bounty is as follows:—Apricots, 9d. per dozen tins; Peaches, 3d. per dozen tins; no bounty on Pears.

This bounty is deemed to be insufficient, and if it were increased to 1/3 per dozen on Apricots, and 9d. per dozen on Peaches, it is considered that this would be sufficient to cover costs; the canners would arrange shipments to London to be sure their goods were on the English market at the best time of the year, which is June, July and August, three months ahead of the New California pack. Californians are canning their fruit in July, August and September.

The Federal Government, in fulfilment of its policy of granting bounties to stabilise exports, could profitably give urgent attention to this matter, as the time is short, and it is most important to procure the market when it is practically free of competition.

During the month, highly creditable fruit shows were held at Diamond Creek, Wandin, Red Hill, Lilydale, and Croydon. The quality of the fruit was excellent, being far better than was expected owing to the somewhat adverse season.

Cr. Jos. Jordan, President of the Metropolitan Fruitgrowers' Association, accompanied by Mrs. Jordan, sailed for the Old Country during March.

The Proprietor of Australian Patent No. 19148, dated 15th December, 1920, for "PINEAPPLE MEAT ERADICATOR," will dispose of the whole or part interest in the Patent or grant licenses on ROYALTY and invites tenders in respect of same in order to fulfil the full requirements of the trade and the public. Address enquiries to Phillips, Ormonde, Le Plastrier & Kelson, Patent Attorneys and Consulting Engineers, 17 Queen Street, Melbourne, where drawings and specifications may be obtained.

#### THE GREATEST TROUBLE

people have who suffer from Rheumatism or Neuritis is in preventing a return of the attack. It comes back year after year despite all the rubbing and ordinary treatment they undergo. This is because they do not drive the dregs of the complaint, which is a poisonous acid in the blood, from the system. No amount of rubbing will do that, the trouble is in the blood. A treatment for Rheumatism or Neuritis that aims at driving out of the system, the cause of the complaint is certainly commonsense. People who have used A.M.S.—a blood purifying medicine—acting through the Stomach, Liver and Bowels—finds that its action not only eliminates the cause of Rheumatism and Neuritis from the system, but fortifies it against future attacks. Therefore, try A.M.S. It is the medicine which makes you feel strong and well. Sold by all chemists and country storekeepers, at 3/-, by post 3/6. Manufactured by T. A. Dickson, Chemist, Geelong, Vic.



# Latham Dehydrators

"STAND ALONE"

The "Rolls Royce" of the Artificial Drying World.

## Some Installations for Foodstuffs.

| Purchase                                                   | Principal Prods                |
|------------------------------------------------------------|--------------------------------|
| Merbein Dehydration Trust, Mildura                         | Sultanas Raisins etc.          |
| Tasmanian Dehydration Pty. Ltd.<br>Bridgewater two plants. | Apricots Prunes Apples         |
| Charles Martin, Yackandandah                               | Prunes                         |
| Swallow & Ariell Ltd. Port Melbourne.                      | Carrots Turnips Cabbages, etc. |
| Woorinen Co-op. Pack Shed, Woorinen                        | Sultanas Raisins etc.          |
| Aurora Pack. Co. Pty. Ltd., Irymple.                       | Sultanas Raisins etc.          |

# D. J. LATHAM

157 Queen Street,  
Melbourne, Australia.

## PRACTICAL BANKING SERVICE AT SYDNEY ROYAL SHOW.

A new interpretation of the meaning of "Service" is presented by the Commonwealth Bank of Australia, in its establishment of branches within the grounds of the Royal Agricultural Societies of the capital cities of Australia. The history of this bank though it goes back only some 13 years or so, discloses many occasions on which its service has literally been taken to the people.

Still fresh in our minds is the part the bank played in the Great War, when its banking facilities actually accompanied the soldiers to the front. Commonwealth Savings Bank agencies were also established on our war vessels for the convenience of Australian sailors, and, indeed, each unit of our Navy still has its own agency on board. Seamen's Savings Banks have been established at the Mercantile Marine offices in each State, and the total of business done at these each year is proof that the sailors find them a convenience, and more, a direct incentive to save some of their pay, instead of, as had all too frequently happened, spending or losing the whole of it on their first shore leave.

When the transcontinental railway was in course of construction, a Savings Bank officer accompanied each camp of men, and transacted their

business for them, literally "on the job."

These are but isolated examples of the efforts the Commonwealth Bank of Australia has made to place its services, particularly those of the Savings Department, conveniently at the disposal of the people. Perhaps the best example of the lot, is the provision of Savings Agencies at nearly 4,000 Post Offices, these serving every district in the Commonwealth.

The latest phase of this great bank's service should be of particular interest to our readers. The bank's showground branches proved such a success at Sydney and Brisbane, that similar branches were established at Melbourne, Adelaide and Perth last year.

Farmers and others will find it a very great convenience to be able to arrange, through the local Post Office, for transfer of funds direct to the Showground branch, where deposits and withdrawals can be made on the spot. City banking hours are from 10 a.m. to 3 p.m., and those are just the hours the farmer likes to spend in the Show itself.

While the bank would be the first to admit that its Showground branch is established partly for its publicity value, it offers a most convenient service, which should fill a long-felt need, and our readers are recommended to take full advantage of it.

# Special Notice to Fruitgrowers

In response to numerous requests from growers for information as to who are members of the WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA, the following list is given. All are members of the above Association, and are registered firms:—

H. M. Wade & Co., 471 Flinders Lane, Melb.  
T. Stott & Sons, 11 Western Market, Melb.  
F. Booth & Sons, 15 Western Market, Melb.  
H. L. E. Lovett & Co., 410 Flinders Lane, Melbourne.  
A. E. Pitt, 12 Western Market, Melbourne.  
J. Davis, 13 Western Market, Melbourne.  
G. Woolf & Sons, 3 Western Market, Melb.  
W. S. Tong, 4 Western Market, Melbourne.  
Silk Bros., 441 Flinders Lane, Melbourne.  
J. G. Mumford, 449 Flinders Lane, Melb.

J. W. Ross, 6 Western Market, Melbourne.  
W. Sweeney, 14 Western Market, Melb.  
J. H. Young & Co. Pty. Ltd., 7 Western Market, Melbourne.  
D. Smith Pty. Ltd., 480 Flinders Lane, Melb.  
Silbert, Sharp & Davies Pty. Ltd., 17 Western Market, Melbourne.  
A. Millis & Sons Pty. Ltd., 5 Western Market, Melbourne.  
W. A. Watkins, 62 King Street, Melbourne.  
P. A. Patrikeos, 31 William Street, Melb.

The whole of the QUEENSLAND FRUITS sold in Victoria, is handled by members of the WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA, under appointment by the Committee of Direction of Fruit Marketing, Brisbane, Queensland.

GROWERS PROTECT YOURSELVES by consigning to members of the WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA.

Correspondence is invited by the Association.

J. D. FRASER, Secretary, 325 Collins Street, Melbourne.

## "Peach Yellows."

### A Destructive Disease Affecting Fruit and Garden Plants.

#### Possibly Introduced by Insects!

One of the plant diseases against which there is the strictest quarantine in Australia is known as "Peach Yellows." This disease is very much in evidence in U.S.A., and the following information, published in "American Nurseryman," will be read with interest by every horticulturist.

Experiments at the Boyce Thompson Institute, Yonkers, N.Y., have thrown new light on the mysterious plant disease known as "yellows," which may be compared to cancer in man. This disease costs the United States millions of dollars each year, destroying whole Peach orchards and even attacking corn, wheat and sugar cane.

Yellows has proved one of the most baffling of plant diseases, it being hard to determine whether bacteria too small to be seen through a microscope were the cause, or whether the disease was due to some disturbed physiological condition within the plant.

As the Aster was found to be particularly susceptible to yellows, the Boyce Thompson Institute chose this plant for its series of intensive experiments, which have resulted in discovering what is believed to be the germ carrier of the disease. Dr. L. O. Kunkel, plant pathologist of the Institute, has proved that the yellows diseases are always transmitted by an insect known as a "leafhopper." Although it is not yet known just what the leafhopper transmits or how he does it, Dr. Kunkel found that when a diseased plant and a well one were imprisoned in a small glass house the contagion did not spread from one to the other unless this particular insect was present. Other insects of similar species were tried in the glass

houses; but though they might hop and scurry from the sick plant to the well one, the latter did not contract yellows until the leafhopper was introduced.

One of the striking things about the transmission of yellows is its similarity to the transmission of yellow fever and malaria in man, which is effected by means of the mosquito. The Boyce Thompson experiments in this field are being continued, and it is possible that their results will throw light upon human as well as plant diseases.

### PROFITS FROM APPLES.

#### Figures Show That Money Can be Made in Apple Growing.

Careful records kept for a period of 20 years on the cost of every orchard operation and on the income from the sale of the fruit from a typical 10-acre Baldwin Apple orchard in western New York show that Apple growing has paid an attractive profit, at least, in this orchard, says Dr. U. P. Hedrick, horticulturist at the State Experiment Station at Geneva, N.Y., U.S.A., who supervised the taking of the records.

The average yearly net profit on a barrel of Apples for the 20-year period was 6/3, and the average annual profit per acre for the 20 years £24/3. Estimating that the orchard is worth £100 per acre, the average annual net dividend has been 26.3 per cent.

These and many other interesting figures on the costs and profits in growing Apples in western New York are presented in a bulletin by Dr. Hedrick, which may be had free of charge upon request to the Station by anyone interested in the study.

Dr. Hedrick has made a special study of the cost of production in an orchard which he believes to be typical of many fruit plantings in the State, and he believes that the figures that he has secured may be duplicated by fruitgrowers in general.—"Fruit Belt," U.S.A.

The firm of W. Weddel and Co. (Australia) Proprietary Limited, who are agents for W. Weddel and Co., Limited, London, have removed from their old address 384 Sussex Street, Sydney, to 79 Pitt Street (4th floor), Sydney. The firm's telephone is B.W.1,000 and 1,009, G.P.O., Box 2429—Sydney.

# Why be satisfied with dwarfs and culls

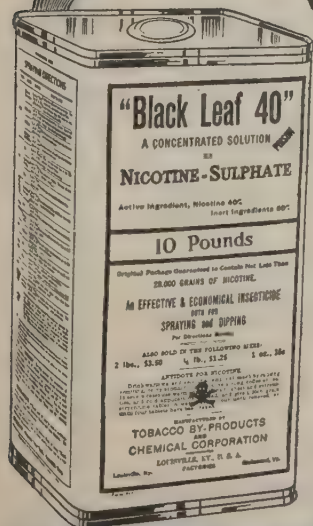
Protect your fruit and rid your orchard and garden of Aphis and similar destructive insects at a cost of only a few cents a tree. "Black Leaf 40," the "Old Reliable" nicotine spray, is recommended by Agricultural Colleges and Experiment Stations. Spray singly or in combination with solutions for scale, codlin moth and other orchard pests.

Sold by leading Australian and New Zealand Dealers

Tobacco By-Products and Chemical Corp.

Incorporated

Louisville, Ky., U. S. A.



# "Black Leaf 40"

40% Nicotine

Kills  
Aphis



## POWERFUL MOTOR PUMP.

### The Hardie Mogul Sprayer.

The Hardie Mogul 10 Motor Sprayer is designed to stand the highest pressure, and the hardest kind of service. Growers wanting such a machine will find good value in this outfit. The Australian agent is Mr. L. E. Quarmbury, of Batlow, N.S.W.

It is equipped with a 200 gallon tank, 4 h.p. Cushman engine, and mounted on our all-steel Autoplex Truck.

The construction of the pump is very strong and rigid throughout. The crankshaft is drop-forged from manganese steel, which is the toughest steel made, it is oversize, being 1½ inch in diameter at all bearings.

The bearings in the pump stands are 2½ inches long. The bed, base, and

all parts of this pump have been greatly strengthened, so as they will stand the hardest wear and the roughest usage.

The pump cylinders are made of semi-steel casting, reamed to gun-barrel finish, and then coated with porcelain. The throw of the crankshaft is spaced equally round the circle, so that one or more of the plungers are always on the downward or working stroke, delivering a constant even flow of liquid to the air chamber. Size of cylinders are 2½ inches diameter, 3 inches stroke. It is equipped with the improved Hardie pressure regulator, the new suction sediment well and every other modern improvement.

Engine.—4 h.p. Cushman—has throttle governor principle, and fitted with late design automobile type gravity feed carburettor. Ignition is by Bosch high tension magneto, with impulse starter.

The cooling system is very efficient. It consists with putting a small water tank, holding about three gallons of water, on the head of the spray tank, then placing a coil of galvanised pipe inside of the spray tank. The water is pumped from the engine round through this tank and coil. It will be seen that the coil in the spray tank is always kept cool by the bulk of spray material lying round the coil, but no spray material passes through the engine.

The improved Autoplex Truck has been simplified. "All small and delicate parts have been eliminated," states Mr. Quarmbury, "and we have

embodied into the new design such strength that it will stand any strain that can be put upon it. The mechanical principles are its low centre of gravity as the load is carried, but 12 inches from the ground. Its easy traction through the use of large wheels, broad tyres, and wide track, its safety on the hillsides, where rocking, bolster and pivoted wheels, provide an element of safety that is most valuable. The frame of the machine is dropped below the centre of the wheels. This enables us to use large wheels and still keep the weight low. The front axle is stationary, with the wheels pivoting on the ends thereof as on automobiles."

Specifications of No. 10 Mogul Triplex Sprayer:—

Truck—All-steel Autoplex, with 32 in. by 36 in. wheels, 5 in. tyres.

Engine—4 h.p. Cushman magneto ignition.

Pump—Big Mogul Triplex.

Suction—Combination overhead and sediment well type.

Frame—Reinforced steel, all joints and connections hot riveted.

Drive—Roller steel chain running on cut steel sprockets.

Tank—200 gallons, 1½ in. thick head staves and cover.

Agitator—Propeller type, running in bronze bearings.

Tank Filler—Zip.

Capacity—12 gallons per minute, at 350 lbs. pressure.

Equipment—Two 50 feet lines high-pressure hose, two Hardie orchard guns.

Victorian Agent—Mr. S. Stott, Wheelers Hill, has been appointed sub-agent for Victoria.

## "GREEN CROSS" Arsenate of Lead Powder

For  
Wet Spraying or Dry Dusting

DOES NOT BURN  
or  
WASH OFF.

Mixes instantly and remains uniformly suspended in Spray-Tank.

1 lb. of Green Cross Powder is equal to from 2 to 3 lb. of the best Arsenate of Lead Paste.

25 lb. Drums . . . 1/10 per lb.  
50 lb. " . . . 1/9½ " "  
100 lb. " . . . 1/9 " "  
200 lb. Barrels . . . 1/8 " "

**Welch Perrin & Co.**  
Pty. Ltd.

48-56 QUEEN'S BRIDGE ST.,  
SOUTH MELBOURNE.

ESTABLISHED 1891

**AUG. STIER**  
FRUIT BROKER,  
Fruchhof, HAMBURG

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Consignments Solicited

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**J. B. MILLS & CO., 9 Queen St., Melb.**

Tasmanian Representatives:

**SILBERT SHARP & DAVIES**

Clyde Street, Hobart, Tasmania

# THE CLYDE

## "Rotary" MANURE DISTRIBUTOR

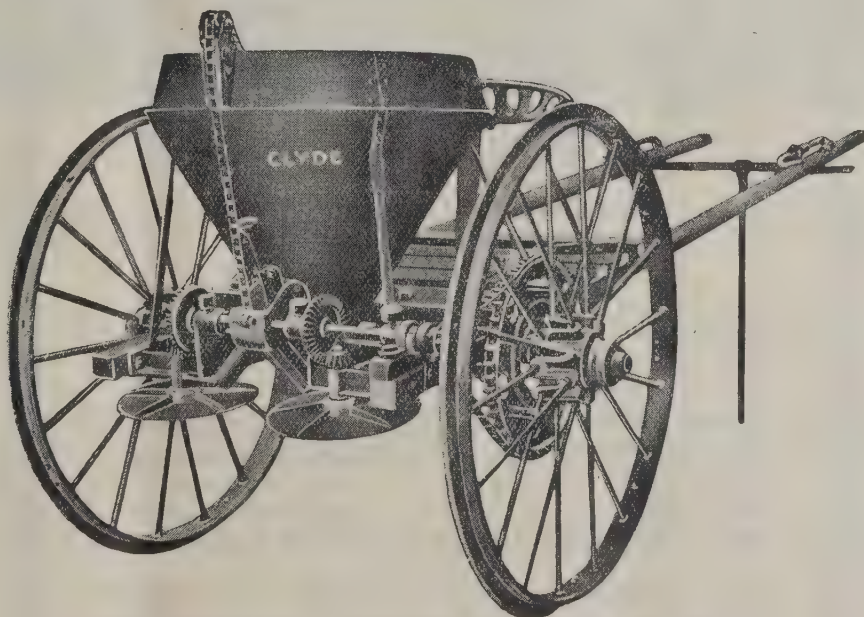
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*Something Altogether Different*

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WILL GO ANYWHERE A POISON CART CAN GO



A Strong Compact Machine. Easily worked with one light horse and boy.  
Will sow from  $\frac{1}{2}$  cwt. upwards without change of Sprockets or Gears.

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Distributes Fertilizer evenly from 15 to 18 feet wide.  
Variation of Quantities instantly controlled by driver.

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Prices and Particulars from

**THE CLYDE ENGINEERING CO. Ltd.**  
**GRANVILLE, N.S.W.**





## "Dust instead of Spray"

### POLICY OF INSURANCE CLOUDFORM DUSTS INSURANCE UNLIMITED

ISSUED TO Mr *Up-to-Date Vigneron*  
ADDRESS *"Wellkept Vineyard"*  
*Australia*



This Policy witnesseth that the Insured named above is insured against loss and damage arising from the ravages of those serious Fungus Diseases of Grape Vines known hated and feared by all good Vine Growers, to wit:—

**DOWNY MILDEW**  
**ANTHRACNOSE** (*Black Spot*)  
**OIDIUM.**

under the conditions herein stipulated, and for the consideration set out at the foot hereof

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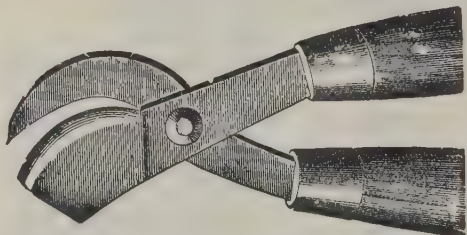
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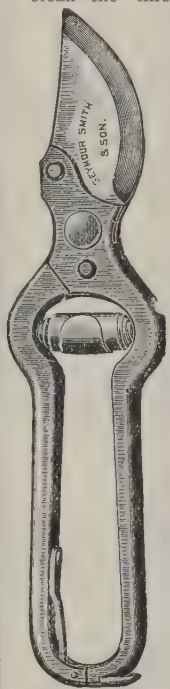
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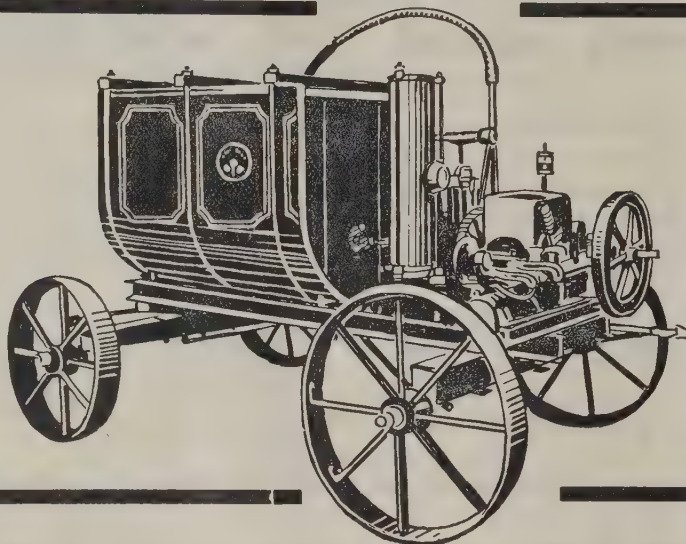
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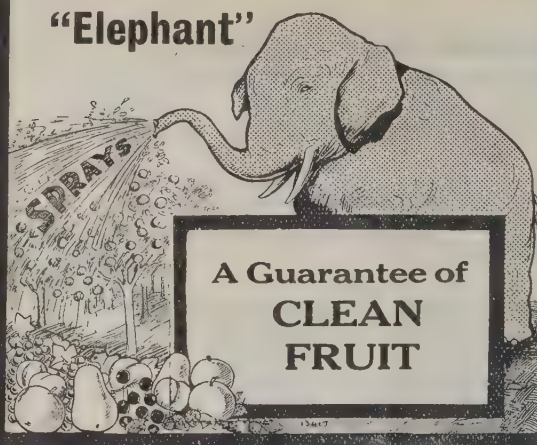
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**"FRUIT WORLD OF AUSTRALASIA."**

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of each Month.

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**Articles and Photographs.**—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printer's MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked "Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

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The annual subscription, post free within Australia and New Zealand, is 8/6. All other places, 10/6, post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

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"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States, as set out below.

Changes of copy for advertisements must be in our hands on or before the 17th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

"The Fruit World" Offices (where copies and full particulars are obtainable) are as follows:—

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E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director: HON. L. M. SHOOBRIDGE, M.L.C.

# Editorial Chats

**THINK BIG.**

**T**HAT there are problems facing the several sections of the fruit industry, no well-informed person will deny. If it be any comfort—or inspiration—the same is true of practically every other primary industry in Australia. But that these problems will be overcome is equally certain. Difficulties were made to be overcome.

Certainly the solving of the problems will call for the best of our talents and energy, but if we go to our tasks with zeal and perform our duties with enthusiasm, in the certain knowledge of ultimate success, there can be no question as to the result.

Australia is a large and fertile continent, the pride of the Southern Seas, the gem of the British Empire. As yet we are but a handful of people in this vast and priceless heritage.

The basis of our success lies in a healthy, contented, well-ordered and ever-increasing population, imbued with high ideals of citizenship, and the spirit of service; the development of our industries, primary and secondary; the advancement of learning.

We emphasise the importance of there being in Australia a contented and prosperous rural population. Also the fact must not be overlooked that the wealth of this country comes from the export of our primary products.

Australian Apples bid fair to maintain a steady export trade. There is room for considerable expansion in the export of Pears, Grapes, and Citrus fruit. As regards the latter, there is scope for scientific research to overcome difficulties which stand in the way of exporting Oranges in bulk. It is in the realm of scientific research, cold storage and shipping problems, waging successful war against insect and fungoid pests and diseases, instruction in orchard practice, packing, etc., that Government Departments can render their best service.

\* \* \*

In the several States there are movements noticeable among the fruitgrowing fraternity. This is healthy. The one thing to fear is stagnation. We have by no means arrived at the formula to set all our

problems right. There is no magic wand. But this is certain, that men of the Anzac breed are here, and will conquer and make good.

The need was never more pressing for the drawing together of the best elements in the fruitgrowing world and the whole of the community with the zest of far-seeing vision, to give the necessary leadership to those movements which will assist the fruit industry to that position of prosperity which is its due, in the performance of which this industry will take its place with others in the upbuilding of our Australian nation and the peaceful conquest of the richest continent under the sun.

**HARMONY AND PROGRESS.**

**D**OUBTLESS the misunderstandings which have arisen in connection with the Victorian fruit industry will soon be cleared up. Growers will surely welcome every sincere effort which is made to improve their conditions; in this respect the efforts of the Victorian Government, through the Victorian State Fruit Advisory Board and Fruit Marketing Organisation will receive due credit for the practical expression of assistance. The Department of Agriculture in many other ways is performing services which growers are not slow to appreciate.

This makes it all the more regrettable that there should have been a misunderstanding. There is a firm belief in many quarters that the State Fruit Advisory Board is capable of rendering useful service to the industry, though it goes without saying that their best service will be rendered when the personnel of the Board is decided by election. The Minister for Agriculture made an unequivocal promise in the House of Parliament on December 22, 1925, as recorded in "Hansard," page 3648, as follows:—

"Early in the new year the Advisory Board will be reconstituted, and the growers will elect their own representatives."

That the growers in the Apple and Pear section did not elect their representatives, but that three were appointed without election, is now history.

It is hoped that on future occasions there will be no local misunderstandings on that score, as it is surely the desire of all earnest men that there shall be both harmony and progress, for the one is impossible without the other.

Doubt has been expressed in some quarters as to the repayment or otherwise of the £2,000 provided by the Victorian Government for the Fruit Marketing Organisation. Some growers are under the impression that this was a grant in order to assist in relieving the glut of Elberta Peaches.

That this is not so, as the growers must repay the money, is absolutely definite from the statement made by the Minister in Parliament, on December 22 last, when he said:—

"The State Fruit Advisory Board had not very much work to do, and I asked it to put forward a practical proposition relating to the marketing of fruit. It submitted a scheme to me. I thoroughly investigated the proposition and ascertained that for the sum of £2,000 we could give the scheme a trial for six months. I said I was prepared to advance the £2,000 on condition that it was repaid."

### THE ARSENIC SCARE.

#### English Trade Adversely Affected.

"A Bogey," says Prof. McAlpine.

That the "arsenic scare" is a bogey, is the considered opinion of Professor D. McAlpine, an Australian scientist of world-wide reputation. Professor McAlpine has sent the Editor clippings from English newspapers giving details of prosecutions of fruit retailers. One statement is to the effect that "the trouble seems to arise from spraying after the Apples are formed, instead of ceasing to spray as soon as the blossom has dropped from the trees." Obviously the writer is not familiar with local orchard conditions.

The 23rd Annual Conference of the National Federation of Fruit and Potato Trades' Associations (Inc.) Ltd., was held at Guildhall, London, on March 13, and some notes from its report, as published in "The Times" of March 14, are of interest in this connection.

"Mr. Henry Titley, the president, in moving the adoption of the report, stated that the Federation was yearly growing and developing. This year they had 627 firms, 1,796 members, and 38 associations with 2,727 members. In 1925 their income was £4,250. They had also assets of over

£14,000. As time went on he was sure that all firms of repute would become members of the Federation. Their propaganda movement had not been so successful as regards home-grown sections. In other directions, however, things had been better, and this year they would have £15,000 or £16,000 to spend on Australian propaganda.

"The United Fruit sections had had a busy and anxious time on account of the trouble in connection with arsenical spray deposits on Apples. He was sure that there had been no real cause for alarm or any serious danger to the health of the community. It had, however, done a deal of harm to all sections of the Apple trade. The bulk of the medical officers all over the country had met the matter in a commonsense manner, but a small section of the press had made exaggerated, and in some cases absurd statements.

He was certain that the fruit trade would be only too pleased to assist the Ministry of Health to eliminate any possible danger arising from the deposit of arsenical sprays, but they must remember that no effective remedy had been found, after years of research, against the ravages of the codlin moth except the spray, which was recommended by the Ministry of Agriculture and other experts."

### THE LATE LUTHER BURBANK.

We regret to announce the death of Mr. Luther Burbank, so well known as a plant breeder and hybridiser, who died at his home, Santa Rosa, California, on April 11, aged 77 years.

He was born at Lancaster, Massachusetts, on March 7, 1849, and was always intensely interested in plant life. As he grew up he began experimenting to improve plants as foods both for man and beast, and the results of his work are now known throughout the world.

In a foreword contained in his latest seed catalogue (Bulletin No. 70), 1926, he says, *inter alia*, "My first venture, the Burbank potato, was produced at Lunenburg, Mass., in 1873, and is now, in 1926, the leading Potato of the world. . . . Since 1873, enough Burbank Potatoes have been produced to load a freight train 14,000 miles long." He originated the edible thornless Cactus; the Plumcot, a new fruit, which is a cross between the Apricot and Plum; several varieties of improved Apples, Plums, Prunes, Peaches, Cherries and other fruits. Grains and flowers also received his attention.

Luther Burbank was a special Lecturer on Evolution to the Leland

Stanford, Jun., University, and a member of learned and philanthropic societies. He wrote several books, the best-known being "The Training of the Human Plant, dedicated to the twenty million public school children of America and the untold millions under other skies," and "How Plants Are Trained to Work For Man."

### EXTRACTING FIBRE FROM BANANAS.

#### Important Developments Pending.

(By Alan F. Furman, Field Engineer and Secretary, Florida Banana Growers' Association.)

A MACHINE for extracting the fibre from the stalks of the Cavendish Banana has been invented by W. B. Simons, of Buffalo, who is now in Fort Myers, Florida, U.S.A. The Cavendish fibre extracted by the device is strong and silky and eminently suited for the making of tapestries, draperies, rugs, and other articles of art such as lampshades, ladies' hand bags, etc. The Cavendish is the only fruit-bearing Banana which has high-grade fibre.

Each 50 stalks will produce one-fourth pound of fibre, so that the fibre alone will yield about 8 per cent. interest on a Banana farm investment. Mr. Simons originally intended his machine be used for rasping sisal fibre and discovered that Banana fibre was valuable. Sisal will grow on the waste lands of Florida, but we import about 300,000,000 lbs. of it annually from Mexico. Mr. Simons has demonstrated his machine in Fort Myers and will now take it to the east coast to demonstrate it to Banana interests in that section of the State.

The Florida Banana Growers' Association is greatly interested in the machine, has operated it and finds that it accomplishes all that could be asked. A holding company is to be formed, the association understands, to purchase the patent rights for the machine. The Palm Beach Banana Plantations of West Palm Beach will operate the device in their office window during the next week for the benefit of those who are interested in it.

The refuse of the machine makes a good feed for chickens or cattle.

Work is being started at Sebring on the Banana demonstration plantation. W. J. Conners, of Buffalo, U.S.A., of Conners' Highway fame, proposes to plant another five-acre Banana demonstration farm which will also be under the supervision of the Florida Banana Growers' Association.—"Florida Grower," U.S.A.



## Arsenic Scare.

### Deplored in England.

Advices to hand from England, regarding the "Arsenic on apples" scare, are interesting.

Under the ægis of the Chamber of Horticulture, a representative meeting of those interested was held at London in December, when it was decided to do everything possible "to prevent an apple scare." The glaring headlines in the press were deplored.

The Horticultural Trade Journal of England has the following information in its issue of January 13.

"The Arsenic in Apples scare has reached Scotland. Messrs. McCowan and Biggart, public analysts for the Burgh of Greenock, in a letter to the press, state that the Public Inspector of Food and Drugs procured several varieties of Apples, which they tested for arsenic. In only one of the apples was arsenic found, about one-hundredth part of one grain. It was all located in the stem cavity, the other parts of the skin and the flesh of the fruit being entirely free from that poisonous body. These results, they say, indicate that with the core and the skin (especially that part of the skin around the stem cavity) removed, the eating of the Apples should be free from danger."

### ARSENICAL APPLE PROSECUTIONS IN ENGLAND.

"The Fruit, Flower, and Vegetable Trades' Journal" (London), of February 13, reports that through the efforts of the London and Counties Retail Fruiterers' and Florists' Association Ltd., the import section of the National Federation of Fruit and Potato Trades' Associations had agreed to raise a fund of £1,000 to defend and defray the costs of the prosecutions of retailers who might be summoned for selling Apples contaminated with arsenic, provided that the retailer produced satisfactory evidence that he had attempted to clean the Apples before putting them on sale. A further stipulation was made that applications for assistance must be made through a retail association only. The secretary of the Association also reported to the annual meeting that a member had had a claim from a woman for damages alleged to have been caused through eating contaminated Apples. This was carefully considered, and was still under consideration as to what action could be taken. Members were urged meanwhile to take advantage of the special insurance effected by the Association to cover such claims up to £10,000, any one claim and an un-

limited number of claims in one year at a cost of £1.

### A BRITISH EAT-MORE-FRUIT CAMPAIGN.

According to the Federal Department of Markets and Migration (Melbourne) the British "Eat More Fruit" advertising campaign in Great Britain supplies a much-needed complement to the auction method of distribution.

By the use of newspapers, posters, window cards, strips, etc., the slogan "Eat More Fruit" has been kept before the public in various forms, while advertising copy calls attention to the benefit of using certain fruits, such as Apples, Oranges, Grapefruit, Lemons, Grapes, etc., in season. Music halls, radio and talking machines have also been utilised to preach the gospel of fruit consumption. The results so far have been such a success as to encourage further efforts. Although the campaign is not yet two years' old, its influence is apparent to those who have examined the fruit trade closely.

### THE PASSING OF THE PIONEERS.

Mr. Robert Mair, Tyabb.

We regret very much having to place on record the death of Mr. Robert Mair, which occurred at his home at Tyabb, Victoria, at the age of 73 years. Mr. Mair was a successful fruitgrower, and always a prominent figure in affairs of district and State importance. He was on more than one occasion President of the Victorian Fruitgrowers' Central Association, and was a member of the Executive for over 20 years. He was a clear thinker and a forcible speaker, and his words were always the more impressive because of their rich Scotch accent.

The passing of Mr. Mair leaves a gap in the ranks of the State-wide Association as well as in his district Society. Mr. Mair leaves a record of splendid, unselfish service, which will surely inspire others to follow his example. He leaves a widow and grown-up family, to whom our sincere sympathy is tendered.

### WHY EAT AN APPLE A DAY?

(By Royal S. Copeland, M.D.)

City folks deny themselves a delicious and valuable food by eating too few Apples. There are fifty varieties of this fruit of commercial importance. How many do you know about and how many Apples do you eat in a year?

Apples constitute a world-wide item of the diet. They are fine for youth and old age when properly prepared. Eaten in the form of old-fashioned Apple sauce or baked in a sugar pan, Apples are fit for the gods.

Feeding experiments conducted recently proved that the protein content is low, although of an especially fine quality. The juice of the Apple is of great dietetic value. Taken freely, the Apple is a laxative and acts favorably on the intestinal tract.

Unfortunately, as is true of other fruits, some persons are sensitive to the protein in the Apple. Fortunately, these are few and far between.

Not only is the Apple valuable on account of its protein and roughage or fibre content, but it also contains the agreeable malic acid. This is claimed by eminent dieticians to be an excellent anti-fermentive, preventing trouble in the intestines. The free use of Apples appears to combat the tendency to acidosis.

The Apple contains vitamins which are necessary to promote growth and to maintain good health.

This fruit is worthy of a more prominent place in the dietary. Usually, it is regarded as a luxury to be indulged in when convenient, or when it can be afforded. As a matter of fact, the Apple should be considered an essential part of the menu.

Nature has so distributed the various forms of food which make a complete ration that it is necessary to include in our diet all parts of the plant—leaves, buds, roots, seeds and fruits. When this is done, we can be certain that nothing has been overlooked. You can see, then, that the Apple is one of the plant foods which should be regularly eaten.

The Apple supplies in a more palatable, though less concentrated form, much the same food essentials that are found in roots. There are particularly the alkaline salts. We need a considerable amount of these to neutralise the acid wastes of our bodies.

In the commercial field, the Apple is put to many uses. The dried Apple is used in the manufacture of jams, jellies, Apple butter and sweet meats in the form of candy and pastries.

Eat fruit every day, especially the Apple.—"Fruit Belt," U.S.A.

# Agriculture and Modern Science.

(By Fred. Thomas, M.A., Bunyip, Vic.)

**T**HE DECISION of the Federal Government to set aside £100,000 to reorganise the Institute of Science and Industry should be of great interest to all fruitgrowers.

Sir Frank Heath, in his valuable report on the lines of research that could most profitably be followed up by the Institute, emphasised the claims of agriculture. Under this section fruitgrowers can look to have some of their problems investigated, and they should welcome the opportunity, and make clear to the Government their interest and their desires.

Of all those who make their living on the land, the orchardist must exercise the greatest vigilance and intelligence. He must have the same

## knowledge of soil management

as the farmer, he must understand the use of fertilisers, and know something of the functions of the bacteria in the soil. To get the same crops year after year from the same piece of ground, he must know what ingredients are removed from the soil by his crops, and what he must return to it. He cannot practise rotation of crops, and so allow his soil to renew its own losses. He must assist it more directly, and to do this requires knowledge and experience. His enemies, too, are many and various. He must be able to distinguish between his insect friends and enemies, and know something of the life cycles of the fungi that foul his crops.

Because of this he should be more than usually ready to welcome the scientist, and to avail himself of his discoveries. Every successful orchardist carries out his own experiments, but only those who have studied the problem know how very difficult it is to arrive at reliable conclusions.

## The methods of experiment

have been analysed and set out for us by logicians like John Stuart Mill and others. The difficulty is to apply them. The Method of Difference is the most powerful of these, and may be phrased thus:—If into conditions incapable of producing the result, a new factor is introduced, and the result follows, the new condition is either the cause or an essential part of the cause of the result in question.

Even in the laboratory, however, it is almost impossible to be certain that only one new condition is introduced, and in the field such a host of conditions are constantly changing, that it seems hopeless for the ordinary man to attempt to comply with the demands of scientific method. Only trained men can so arrange their tests and observations that their conclusions can be safely accepted.

The orchardist must therefore

## look to the scientist

for help, and he should accept scientific truths with certainty and gratitude. The scientist has a passion for truth. He makes mistakes like other men, but he knows more than we do of the possibilities of error, and deliberately guards against them. Again, if a scientist announces a discovery, his work is repeated by research students all over the world. It is checked and tested in every possible way, and if there is an error it is soon pointed out.

In 1924 a conference upon agricultural education was held at Wembley. It was attended by representatives of the Dominions, as well as by those of the big agricultural organisations of Great Britain. It is noteworthy

that before settling down to practical work, this conference embodied in a resolution its considered opinion that agricultural prosperity depended upon three things, and the first of these was the application of scientific knowledge under the guidance of the State to the farming industry.

America is at present more ready to enlist the aid of science, and to accept and apply its conclusions than is Australia. It may be of interest, when we are about to make more use of our trained thinkers, to see what is being done in the United States.

The Thirty-fifth Annual Report of the State College of Washington Agricultural Experiment Station is just to hand. Washington is the north-western corner of the United States. Its population is about 700,000, yet it finds that it pays to

## spend £43,000 annually

on agricultural experiments. This Station is supported by grants from both Federal and State Governments; the Federal grant amounting to £7,500, while the State gives £24,407.

Services rendered to the State by the Station bring in another £11,000, so that altogether about £43,000 is spent on this one experimental station for the benefit of farmers and orchardists, every year. There is a staff of 40, all men with university degrees. The work covers all branches of agriculture, and there are 13 different departments.

Last year the investigations of interest to fruitgrowers were as follow:—

1. A study of the changes in Apples during periods of ripening and storage. The object of the work was to establish standards with which to ascertain when Apples should be harvested to make them the most profitable, and how long they may be kept in storage without loss of quality. Samples were taken from a commercial orchard, both before and after the commercial harvesting period, and are being tested periodically, both by the Chemistry Department and the Horticultural experts.

It was found that the hardness of the fruit was directly related to its stage of maturity. The most practical method of measuring the hardness has been to measure the pounds pressure required to indent a one-inch ball one-eighth of an inch into the unpared fruit. Highly-colored specimens are used as the standard. In the field, weekly observations were made of the growth of the fruit, starting three weeks before and continuing for three weeks after the commercial picking season. It was found that the greatest growth was made during the first two or three weeks of the picking season.

The increase in the growth of Jonathans was one size per week, but the growth of Delicious was not so marked. The color increased very rapidly during the final days of picking, and the average grade of the fruit was higher each day the picking was postponed. The small loss from windfalls, mostly fruit, was outweighed by the advantages of gain in size and color.

The general practice of orchardists to make two or three pickings

was also confirmed by experiments. It was found that Delicious Apples increased in size more rapidly when a portion of the crop was removed, while the reduced load caused the fruit to cling more tenaciously to the tree.



At the close of the harvest season the tree having only one picking dropped 22 per cent. of its fruit, while the tree with two pickings dropped only 12 per cent.

2. Oil Sprays.—This investigation was undertaken by the Departments of Chemistry and Entomology, and the following conclusions were obtained.

(A) Processes known as refining of lubricating oils do not add to its insecticidal value.

(B) There is no apparent difference in the effectiveness of paraffin and asphalt base oils.

(C) A miscible type of oil gives better results than any of the mechanical emulsions.

(D) A caseinate emulsion gives better results than other mechanical emulsions.

(E) The addition of extra soap to a miscible oil does not alter its insecticidal qualities.

(F) Spraying at half strength, either with or without caseinate spreader, does not give different results from spraying once at full strength.

(G) The addition of a caseinate spreader detracts from a miscible oil spray.

(H) An oil spray should be used at 7 per cent or 8 per cent. for leaf roller, and not weaker than 4 per cent. for San Jose scale.

## The Importance of the Agricultural Bureau.

IN the States of South Australia and New South Wales, there is established what is known as the Agricultural Bureau. This institution is performing valuable service to the agricultural and fruitgrowing industries.

As it is suggested that the services of the Bureau have not been availed of by the fruitgrowers, we are publishing herewith a description of the doings of the Agricultural Bureau in New South Wales.

At the present time Tasmania is considering the adoption of the Agricultural Bureau system, and there are not lacking in Victoria, advocates for its adoption.

The following is a copy of an address by Mr. C. C. Crane, the organiser of the Agricultural Bureau in New South Wales.

In organising the Agricultural Bureau the Department of Agriculture of N.S.W. has merely followed the example of most civilised countries. Every country has its Department of Agriculture, whose function is in the first place to get facts and definite knowledge, and in the second place to arrange for these facts to be presented to the producers in an acceptable and practical form.

It does not really matter how efficiently it may carry out its first function unless its second function be operating satisfactorily.

The Agricultural Bureau is designed for that purpose, and it has increased the efficiency and usefulness of the Department very materially.

No one can see your problems from quite the same angle as you see them yourselves, and the Department has therefore, by organising the Bureau, asked the farmers to indicate just what services they require, and just how those services are to be rendered. In designing the Bureau it was essential that it should have certain definite features.

It should be simple.

It should be open to all farmers and fruitgrowers.

It should be inexpensive.

It should be controlled by the producers.

It should be strictly non-party political, and strictly non-sectarian.

Its branches should be located in any little centre where it would be most convenient for producers to attend.

It should be flexible, so as to be able easily to adapt itself to new requirements.

The Bureau of to-day has these features.

It represents the attitude of the Department of to-day, which, put briefly is. We have a Department of Agriculture. Can you make more of it? Tell us how, that it might be of service in your locality. The Bureau differs perhaps from other organisations in that the value of the Bureau lies rather in the local branch than in the work of its Advisory Council. We have a complete organisation, but it is worth stressing that each branch

### retains complete control

of its own affairs, gets no instructions from the Department of Agriculture, or from its Advisory Council, and is essentially a "help yourself" organisation. Just so soon as a branch hands a thing over to a sub-district Council or a district Conference to the Advisory Council, without first doing all that is possible locally to refer it on as a bit of constructional suggestion for wider action, just so soon does that branch begin to fail to justify its existence.

The motto of the Bureau is "Better Production, Better Business and Better Living." This implies that the Bureau is distinctly a Progress Association, but with wider ideals than the generally accepted form of a Progress Association. It is a Progress

Association which does all of those things which are generally done by Progress Associations, but which believes that its progress depends largely upon education arranged on practical lines, on practical subjects and enjoys the full co-operation of the Department of Agriculture.

This co-operation implies the services from time to time of our educational and instructional staff, to deal with veterinary, fruit, dairy, agriculture, in short, with every aspect of the farming industry, with the establishment of experiment plots under your own control, but with the assistance of the Department, with the full supply of agricultural pamphlets and literature. The form of instruction will be demonstrations or lectures, and frequently investigation of abnormal conditions, leads to a considerable increase in actual knowledge and consequent adoption of better methods.

It is important to stress, in connection with the Bureau, that its primary object is to get information at first hand, from any Council. Great benefits are to be derived from discussions among yourselves, especially if that discussion is open in the form of an address or a paper on a given topic, for then the debate will be organised, whereas, without some such introduction, there will be a tendency for such discussions to ramble.

Similar benefits are to be obtained from the same kind of work, but with the discussion led by a paper from a member of another branch. Beneficial information is obtained by arranging visits by officers of other Departments, such as Lands, Forests, etc., etc. In short, no source of possible information should be neglected.

Your branch should seek the widest information on all points, as they affect your farming operations, your business connections or your living conditions, and prompt but fair constructional criticism is a habit that is worth developing.

It is a very rare thing for a branch of the Bureau to become indifferent, but that is your concern, it will depend on your ability to pull together, your general ability to acquire on all votes duly passed by a majority of the members a preparedness to discuss details at the meetings rather than in groups after meetings, by a stronger conduct of affairs, and by cordial support of the officers whom you may appoint to discharge your business.

We, as a Department, cannot keep a branch alive, nor would it be worth the trouble if you failed in the initiative and constructiveness and action that community matters may call for.

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**Apples for London.**—Recently Major Dakin, Australian representative of the firm of Messrs. Geo. Monro Limited, fruit salesmen, Covent Garden, London, cabled his firm as follows:—"Federal Government taking exceptional precautions against Apples showing arsenic being shipped to London, Lloyds' agents state they are insuring against arsenic. Can I inform growers that your policy will cover this?" Major Dakin received the following reply:—"That shippers are covered against claims from buyers."

## Tasmania.

Fruit Shipments :: Spraying  
Powdery Mildew of the Apple.

(By Our Correspondent)

### Record Shipments.

THE Apple export season is now in full swing. Southern shipments to Interstate markets are increasing, and additional large consignments are being forwarded from the Tamar and Mersey Valley districts.

The fruit, on the whole, is of excellent quality, being clean and free from disease. In some of the drier districts, late varieties are carrying a proportion of small-sized fruit, and it is evident the general size average for these will be slightly below a normal season.

The quantities shipped out of the State to date, are as follows:—

Overseas—1,257,000 cases.

Interstate—325,000 cases.

There are still several overseas vessels which are due to lift cargoes, and there is every indication that the season will eclipse the previous 1923 record of a million and a-half bushels.

### Exeter Show.

The Tamar Farmers' and Fruit-growers' Association are again to be congratulated upon the successful Show which was held at Exeter. A splendid exhibit of fruit was staged, both in the "case" and "plate" sections.

For the third year in succession, Mr. P. R. Beauchamp, of Roswears, annexed the blue ribbon for the six best export varieties of Apples. This entitles him to the possession of the silver challenge cup which has now been won outright.

A new orchardist and exhibitor in the person of Mr. H. F. Wright, of Sidmouth, was successful in obtaining the premier honors in the packing sections, whilst Mr. W. Fulton, of Legana, secured the highest award in the Pear section, with a splendid exhibit of Josephine de Malines Pears.

The following districts will hold their annual fruit Shows during April and May:—

Bagdad—April 24.

Launceston—April 29.

Franklin—April 30.

Cygnets—May 12.

Geeveston—May 21.

### A New Apple.

At the meeting of the State Fruit Advisory Board, held in April, a form-

er member of the Board (Mr. F. Walker), of Lalla, submitted some specimens of the new Apple which he has raised at his orchard in N.E. Tasmania.

This originated as a "sport" from an ordinary Delicious tree that is included in the orchard. The Apple received very favorable comment from members, and is a handsome fruit.

Possessing all the characteristics of the parent, it has the additional asset of a deep rich red coloring. The tree is similar to the Delicious in foliage and cropping habits. Mr. Walker has now about 50 trees in the orchard which are seven years old, and have been propagated from the original sport. These are all bearing fine quality fruits without any variation in the rich red coloring, which brought the Apple into such prominence. A resolution was unanimously carried, commending the Apple to the Australian Pomological Committee as a distinct improvement on the ordinary Delicious, and congratulating Mr. Walker upon the introduction of the fruit into the Apple-growing industry.

### DEMONSTRATION SPRAYING PLOTS.

#### Control of Black Spot in Tasmania.

THE Tasmanian State Fruit Expert (Mr. P. H. Thomas) is in receipt of the following report from the Assistant Fruit Expert, in connection with the demonstration plots which were arranged throughout the different districts last season.

Following is a summary of the results on the orchard plot made available by Mr. A. B. Curran, of Hillwood, and taken over by the Fruit Division for the purpose of demonstrating the efficacy of the spray treatment which gave good results in the experiments carried out during the 1924-25 season.

The plot consisted of two rows, each of Jonathans, Cox's Orange Pippin, New Yorks, Sturmers, and Glou Morceau Pears, numbering about 300 trees in all.

The varieties received the following treatment, Jonathan, Sturmer's Pippin, New York, and Glou Morceau, "delayed dormant" Bordeaux 6-4-40, pink 4-4-40, "calyx" 1½-1½-40; on the



Pears the "calyx" application was increased to 2-2-40, and on the Jonathans it was reduced to 1-1-40.

The C.O.P. were treated with a "delayed dormant" Bordeaux 4-4-40, "pink" 2-2-40, and a later application of lime sulphur 1-40.

Seasonal conditions have not been conducive to any very serious development of black spot on Apples, never-the-less the difference between sprayed and the unsprayed check trees is very noticeable throughout the plot, and it may be said that all the Apple varieties treated are practically clean, it being a difficult matter indeed, to find a spotted Apple on such trees.

On unsprayed, or check trees, the percentage of black spot in evidence, was approximately from 8 to 10 per cent. on Jonathans, Cox's and Sturmers, and from 10 to 12 per cent. on New Yorks.

Referring to the two rows of Glou Morceau Pears, which are carrying only a very small crop, in many instances not more than a dozen fruits to the tree, the treatment has not been a success, as a large percentage of the fruit is affected with spot. The first spray was applied to the Pears on September 18, at which time the majority of the buds were in the "green tip" stage. The second application was made on October 3; at that time the trees were in the "pink" stage, soon after this, spot was visible on the unsprayed trees, and a careful examination disclosed traces of spot on the sprayed Pears. On October 27, the third spray was applied, and although this had the effect of checking the fungus very considerably, the results have not been satisfactory.

It must not be thought that these applications had no effect, as both fruit and foliage have come through the season at least 50 per cent cleaner than the unsprayed trees which, by the first week in December, were so severely infected, that no fruit remained, and fully 90 per cent of the leaves were badly spotted.

As already mentioned, the spray treatment as applied to the Apples so far as black spot is concerned, was quite satisfactory this season, all varieties treated showed a decided improvement over the untreated, for not only did the latter carry on an average 10 per cent of spotted fruit, but a considerable amount of spot was visible on the leaves, which, in the case of treated trees was almost absent.

One feature which seems to warrant mention, is in regard to the difference in size and color of fruit on varieties which were treated with Bordeaux. It was noticeable on all varieties, but more particularly with the Jonathans, that not only did the fruit lack in color, but also a little in size when compared to adjoining rows which had been sprayed with lime sulphur.

This can hardly be attributed to soil conditions, as the rows were lengthy, containing some 30 odd trees running right through the orchard, soil conditions appeared similar, and had received the same treatment as regards cultivation and manuring, and the difference in size was so consistent that it seems to be in some way connected with the spray treatment.

An infestation of red spider, which appeared to be most severe on trees which had received only Bordeaux treatment, was at first thought to be

in some measure responsible, but it was soon apparent that this was not the case, as the fruit on the unsprayed or check trees which were interspersed throughout the rows were found to be bearing fruit of a slightly better size and color. It should also be mentioned here, that, over all the varieties sprayed, there was little or no evidence of what is generally termed "Bordeaux russet."

## THE POWDERY MILDEW OF THE APPLE.

*Podosphaera Oxyacantha.*)

(By P. H. Thomas, Tasmanian Government Fruit Expert.)

THE spread of the fungus disease, known as powdery mildew, throughout the fruit district of the State during the past seasons, has increased, and the consequent damage to trees in areas affected has been marked. Certain varieties of Apples have shown themselves very susceptible to the fungus, the leaves, fruit buds, etc., in numerous cases being damaged to the extent of almost total defoliation. This has undermined the health and vigor of the tree, and restricted its growth and productivity.

There are many species of mildew of the "white" or "powdery" variety, and they can be found on nearly all kinds of vegetation. Apple trees attacked by *P. oxyacantha* are first noticeable by the condition of the young shoots and fruit buds in the early spring. These are generally distorted and covered with a whitish powder, the

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disease being much more marked in the case of trees with light laterals that have been left unshortened, and are putting forth new terminal growths.

As the season progresses, the affected portions will die, turning a brownish black in colour, and giving the appearance of having been scorched. It is through this form that the disease in a lot of districts has received the misnomer of "fire blight." dreaded fire blight (*Bacillus amylovorus*), which has caused widespread. This is very different to powdery mildew.

Although the mildew has done a great deal of damage, it is not of such an insidious nature as the ruin in the States of America. Although the fungus may be found on most of the varieties of commercial Apples that are grown, there are a few kinds which suffer to a greater extent than others. Cleopatra, Cox's Orange Pippin, Jonathan, and French Crab are amongst the most susceptible.

Plant pathologists have been experimenting for a number of years with various preparations and fungicides in order to combat the disease, and a certain amount of success has been experienced. Sulphur dusted on in the dry fine form has long been recognised as one of the best treatments for most of the mildews, and the method is practised with a large amount of success by nurserymen in dealing with disease amongst their Apple stocks. The young trees are treated by use of a pair of sulphur bellows in the early morning whilst the dew is upon the trees.

During the last few years a commercial preparation known as atomic sulphur has been used with good results. Atomic sulphur is a finely-divided flowers of sulphur, so treated that the particles are held in suspension in liquid form, and can be applied with an efficient spray pump. Lime sulphur and iron sulphide mixture have also given good results in controlling the spread of the disease.

The latter mixture is made by dissolving about 3 lbs. of sulphate of iron crystals to five gallons of water, the solution being stirred into a mixture of lime and sulphur at the strength of one gallon of concentrate to 45 gallons of water. The resultant mixture will be black in color, and contain a precipitate that will very soon settle to the bottom of the vessel. If this spray is used it will be necessary to keep it well mixed, otherwise a very uneven application will result.

The first spray should be applied before the buds commence to unfold,

and should be followed by successive sprayings, according to the condition of the trees. During the pruning operations a small bag or satchel should be carried, in which all affected growths should be placed to be burnt as soon as a quantity has been gathered.

If the disease is to be combated with any success, concerted effort will be necessary. The conidiospores are produced in very profuse numbers, and are disseminated by the wind and other agents over a large area. They are capable of germination upon reaching a suitable host plant. By this it will be seen that one or two untended areas in a district may re-infect orchards that have been practically cleansed.

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#### POWDERY MILDEW.

##### Results of Experiments.

The Assistant Fruit Expert has also presented a report regarding powdery mildew, as follows:—

Owing to the severity of this disease in northern orchards during the wet season of 1924-25, and the difference of opinion that existed among orchardists as to the best methods of control, it was thought advisable to make comparative tests with the two fungicides, atomic sulphur and iron sulphide.

With this object in view, ten rows of Jonathans, numbering about 800 trees, were taken over on Mr. Weston's orchard at Exeter. These were divided into five plots, and subjected to the following treatment.

Plot A.—"Delayed Dormant" application of iron sulphide.

Plot B.—"Delayed Dormant" application of iron sulphide, plus "Calyx" application of atomic sulphur.

Plot C.—"Delayed Dormant" application of atomic sulphur.

Plot D.—"Delayed Dormant" application of atomic sulphur, plus "Calyx" application of atomic sulphur.

Plot E.—Check rows, untreated.

The first, or "Delayed Dormant" spray was applied on September 15. Formulas used were, for the iron sulphide spray: 1 gallon of lime sulphur, 270 Beaume, and 2½ lbs. sulphate of iron, to 40 gallons of water; the atomic sulphur was applied at the rate of 4 lbs. to 40 gallons of water.

An inspection of these plots was made at frequent intervals throughout the season, and results noted.

At the time of blossoming, very little "powdery mildew" was in evidence on either the sprayed or unsprayed plots, but by the time the "calyx" period had arrived, a considerable increase was noticeable, the unsprayed trees showed from 6 to 8 per cent. more affected spurs and shoots than the sprayed, a careful examination at the time failed to disclose any very marked difference between the plots treated with atomic sulphur and those treated with iron sulphide. The latter appeared to have slightly the better foliage, both in appearance and quantity.

On November 10, plot B, which was then in the "calyx" stage, received the second application of iron sulphide, the same formula being used, and plot D was again sprayed with atomic sulphur, 3½ lbs. to 40 gallons.

During the months of December and January, there was an increase in mildew on the unsprayed plot, also on plots A and C, which had been sprayed only once, this increase was slight.

The second spraying appeared to almost completely check any further development of the disease, but until the time of picking, it has been possible to discern very little difference between these trees treated with atomic sulphur, and those treated with iron sulphide.

The iron sulphide plots appear to have had slightly better foliage throughout the season, the leaves were perhaps larger and of a darker green in color, but careful examination and comparison of the plots during the picking season show that for actual control of "powdery mildew," the plots treated with atomic sulphur are slightly in the lead.

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"I am very pleased with the "Fruit World," which is a valuable paper. I am always on the lookout for it each month."—(Sgd.) J. G. Taylor, Curlew, N.S.W.



## Shipping Fruit to its Best Advantage.

(By Ralph Nichols, Member of the Firm of Barney Springer, Covent Garden Market, London.)

[The writer of this article visited Australia last season, and submits the following hints as the result of his experience in handling fruit.]

As the aim of the grower is to ship his fruit to the best possible advantage, I venture to discuss this important topic.

### Growing the Fruit.

Each grower should know his own local conditions best, and from his experiences of his previous crops, he should know whether he has been doing either of the following procedures. First, whether he has been giving his orchards the right kind of artificial manures suitable to his crops. Second, whether he has been using sufficient manures in order to produce for himself good results. Third, whether he has been using the right kind of sprays against the various kind of pests he has to contend with, and fourth, whether he has sprayed sufficiently to combat and overcome such pests.

Now, assuming that the grower has done all that he need to do as regards the above, keeping his orchard clean and the necessary pruning of his trees, the crop has grown and sufficiently matured to be ready for picking, his next thought is "How he can market the fruit to the best advantage to himself."

### On Picking and Packing.

The fruit is next picked and taken to the packing shed, and this is where every care should be taken for its future welfare. The fruit should be very carefully graded, both as to size and quality. The question of quality also takes up the condition and color of the fruit according to the particular variety being handled.

The container or case into which the fruit is to be packed is the next consideration. It should be clean and uniform in size, with the usual requirements that are necessary to comply for the carrying of the fruit in good condition to its destination. Every Apple should be wrapped in paper, oil paper for preference, and carefully packed into the case. The Apples should be packed as tightly as possible to avoid any slacking up during transit, and by the time a case is filled before the lids are nailed down the Apples should be at the least half an inch above the case top, so that when the lid is nailed on the final

pressure will tighten the Apples to ensure good transit. One thing more. A piece of corrugated cardboard should be used both at the top and bottom of the case, together with a very small quantity of soft wood wool.

### About Exportation.

Having taken the various precautions in the growing and packing, the question of export arises. I strongly recommend all growers and shippers to export as many of their "Special" and "Standard" grades, and as few as possible of anything inferior, for the following reasons:—(1) That the transit and export charges are equally as much for lower grade fruit as for high grade fruit, and therefore proportionally much higher. (2) That a lot of inferior fruit on a market will cause an unnecessary depression, thus depreciating the value of the good fruit. (3) Growers want to realise what it means to the broker, who is handling his fruit, and it will soon be seen that if a broker is stocked with a quantity of inferior or badly-packed fruit it is going to take a lot more selling, a slower sale in consequence, poor returns to the shipper and satisfaction for nobody, and possibly the loss of trade, either he loses a customer or a shipper. (4) To the shipper it means everything to ship out a consignment of good fruit, good prices, ready sale, quicker returns, and last but not least, the establishment of his brand, which often commands a sale before it is actually on the market.

### The Wiring of Cases.

Is it necessary to wire or strap the cases of fruit? In brief, I would advise all shippers to do it. Wiring or strapping a case strengthens the case tenfold, and I am confident it would decrease the number of cases broken in transit, and the loss of fruit from such cases. The cost of wiring a case is about one penny, and the loss sustained on a broken case might be anything from 1/- to half its value, and therefore the necessity speaks for itself.

### How to Market Your Produce.

The shipper wants to minimise the number of hands his produce will pass through before reaching the consumer, and here I contend he must very carefully choose his broker or salesman by finding out to whom his broker sells to. Where goods are sold by

auction on the English markets, it is common knowledge that the very large majority of buyers are the market merchants who resell to the retailer. Where goods are sold by private treaty direct to the retailer, it is without doubt the finest method of handling, not alone to minimise the cost, but minimises the number of hands the produce passes through. With the firm of Barney Springer, of Covent Garden Market, London, whom I represent, the latter is our principle, the principle of selling direct to the retailer, not to the middleman, thus we maintain that we can obtain for our shippers top market prices.

### A Point the Grower Should Ascertain.

The next question for the consideration of the shipper is to ascertain as to whether the broker to whom he may be shipping is buying apart from receiving for sale on commission basis. If he is, is it not natural that he will look after and sell his purchases first, then the commission traffic becomes a secondary consideration, which is detrimental to the shipper. Therefore, I do without fear of reproach from anybody strongly urge shippers not to consign to any broker that is buying against their interest.

### The Fallacy of Control.

It would be a fallacy on the part of growers or shippers to endeavor either to control the number of bona fide brokers, or to fix a minimum price on their produce. The shipper must bear in mind that fruit is of a perishable nature, that the best judge as to its value on arrival at market, is the man of experience who is handling it, that to do away with competition among the brokers is to kill the competitive initiative of the trade, and to prevent fresh enterprise would also destroy such initiative. Growers would do well to study these many items I have detailed upon, and I think they will then agree with me that upon the many points referred to they are well worthy of their consideration. If not, write and tell me so, and if you can convince me that I am wrong in my deductions I shall be happy to submit to better judgment than my own.

(Signed) RALPH NICHOLS.

c/o Barney Springer, Covent Garden Market, London, England.





## Murray Citrus Growers.

Important Conference at Overland Corner, South Australia.

THE fifth annual general meeting and Conference of Murray Citrus Growers' Co-operative Association (Aust.) Limited, was held at Overland Corner, South Australia, on March 18.

The President, Mr. F. H. Metters, occupied the chair and the following delegates attended:—Murray View (Mr. F. H. Metters); Waikerie (Messrs. H. H. Howell, K. Dunstan, J. Allen and E. H. Barratt); Kingston and Moorook (Messrs. E. W. Chaston and C. B. Thomas); Berri (Messrs. C. N. S. Mueller, A. P. Wishart and A. V. Mills); Winkie (Messrs. C. Plush, H. Von Bertouch and L. A. Chapple); Toorak (Messrs. S. Phillips and T. D. Felstead); Renmark (Messrs. C. H. Katekar, E. N. Seary, F. J. Olorenshaw and T. E. Guscott); Mypolonga (Mr. J. McKerlie).

The annual report indicated a steady increase in the share issue, the total now being 1,513, an increase of 80 on the previous year's register.

### Changes.

In the retirement of Mr. C. A. L. Morant, the executive had sustained a great loss, his interest in the organisation having been exceptionally keen. An appreciation of his services was placed on record.

Several Branch changes had also taken place. Mr. C. B. Thomas replacing Mr. Vic. T. Davies as secretary at Kingston and Moorook, and Mr. J. B. Murdoch filling the secretarial vacancy created at Waikerie by the retirement of Mr. T. G. Heming.

### Markets.

Approximately 60,000 cases reached the Melbourne market from our districts; 20,000 being sold in Adelaide, the total pack being 110,000 cases, which was a big increase over the 1925 production.

Generally speaking, the fruit marketed during the 1925 period, showed a distinct advance in quality compared with 1923 and 1924 seasons, and the packing and grading left little to be desired.

### Finance.

Levy receipts exceeded those of 1924 by about £400, and the chairman, in moving the adoption of the balance sheet, considered the position very encouraging.

### Direct Sales to Consumer.

Conference first directed attention to a report submitted by Waikerie branch on the operations of the scheme as carried out by that district last season. Mr. Dunstan read the statement, which showed that during the season 908 cases had been sold, the gross realisation on which amounted to £654/6/-, on the basis of 14/- per case for Navels, 7/6 per half case, and 16/- and 9/6 respectively for Mandarins, which prices operated until September 14, when a reduction was made to 12/6 and 7/- for Navels, and 15/- and 8/- for Mandarins.

A pool having been formed to give equity to local growers, those participating received 8/9 per case for Navels and 11/- for Mandarins. The turnover of 908 cases as compared

with 1,700 the previous season was regarded as unsatisfactory, and it was considered that a mistake had been made in fixing the price too high in the early part of the season, which was 1/- in advance of 1924.

The following is the finding of the committee:—

"In the light of experience gained, we are of opinion that a big business is possible on a very bedrock price basis, especially with all districts solidly behind the scheme.

"That a fluctuating price is impossible.

"That freight rates are too high.

"That the scheme cannot apply to all the State, as rail and river handling to the West Coast, for instance, costs more than the grower receives, the same thing applies in a lesser degree to the Commonwealth lines also, when taken in conjunction with State charges.

"Given a district suitably situated, with packing centrally controlled to expedite despatch and economic working, there should be an outlet for a large quantity of fruit in territory now untapped.

"But realising, should head office undertake such a policy of marketing, they would at once be in conflict with present channels of distribution, the Waikerie executive cannot recommend the Association to adopt the scheme in a large way at present.

"Should any district have all, or some of the more important qualifications necessary to reach out after such business, it should be within their province to do so, as such action benefits the industry by removing fruit from our already greatly congested metropolitan markets." After a general discussion it was resolved, on the motion of Messrs. Phillips and Chapple, "That the Waikerie branch be thanked for their report."



### Association Brand.

Mr. Phillips introduced the subject of a distinctive brand for Association fruit, and suggested that the time was opportune for its introduction. The president indicated that consideration had been given to the question from time to time, and the reason for the delay in bringing it into operation was that it was thought desirable that growers should improve their packing and grading methods before the Association committed itself to a brand. A general discussion showed that members were in favor of the suggestion, and it was resolved, on the motion of Messrs. Phillips and Mueller, "That it be a suggestion to central executive, that a distinctive registered brand be adopted by this Association for use in Australia." The design and details of the brand were referred to the central executive.

### Conferences in Adelaide.

The notice of motion on this subject was, in the absence of Mr. Murdoch, introduced by Mr. Dunstan. It was felt that financial circumstances were not sufficiently satisfactory to warrant the proposal, and it was resolved (motion, Messrs. Dunstan and Plush), "That this conference is of the opinion that the time is not yet opportune for holding the annual conferences in Adelaide."

The discussion revealed a difference of opinion amongst delegates regarding the place of meeting, and a motion was submitted by Mr. Dunstan, seconded Mr. McKerlie, "That this conference is in favor of holding the annual conference in the three main river centres."

An amendment, moved by Mr. Seary and seconded by Mr. Chaston, "That the conferences be held at Overland Corner," was carried.

### Export, 1926.

The Renmark Branch submitted a resolution, "That it be a recommendation to delegates to annual meeting and conference, that the export for 1926 be reviewed." Mr. Katekar stated that, in view of the action taken by the V.C.C.A. regarding export, and also the lighter crops, it was hardly fair to ask growers to export the cream of their crop, and urged that it be a recommendation to central executive to still further reduce the export quota.

It was resolved, on the motion of Messrs. Katekar and Chapple, "That this conference recommends central executive, that the export for 1926 should not exceed that of 1925."

### Pre-Cooling of Export Fruit.

Mr. Olorenshaw submitted account sales for export on account of two

parcels, one pre-cooled and another not, and considered that the higher value realised for the latter was an argument in favor of omitting pre-cooling. He moved, "That a shipment be made without pre-cooling in conjunction with a parcel pre-cooled," seconded by Mr. Felstead.—Carried.

### V.C.C.A. Conferences.

"That consideration be given to holding the Annual Conference of the V.C.C.A. in a central river district, and that further representatives be sent from Murray Citrus Growers' Co-op. Association."

Mr. Seary explained that discussions had taken place regarding returns from Melbourne agents; dissatisfaction existed, and he thought that it might be desirable to send more representatives to Melbourne. He had discussed the matter with the president and secretary, and had come to the conclusion that it would be to the advantage of the Murray Citrus Growers' Association, if a conference between the two bodies could be brought about.

The secretary pointed out that the V.C.C.A. annual conference in Melbourne was similar to the present one at Overland Corner, and that South Australia was represented at the request of the V.C.C.A., as an act of courtesy, but had no vote on their internal matters, except those relating to Melbourne marketing operation. In view of the expense involved, which was, unlike the Murray Citrus Association, borne by the districts, he thought it unlikely that the V.C.C.A. would accede to the request, but, if a meeting between the executives of the two Associations could be brought about, much good would result.

The President and Messrs. Mueller and Phillips supported the proposal, and it was resolved, on the motion of Messrs. Phillips and Seary, "That consideration be given to the holding of a conference between the executives of the affiliated Associations."

### Export Levy Fund.

Resolved, on the motion of Messrs. Phillips and Mueller, "That the export levy fund be held in abeyance for another year."

### Secondhand Cases, Adelaide Market.

Mr. Barratt suggested that some action should be taken to prevent the use in Adelaide of secondhand cases, he had frequently seen cases from river districts being used on that market. It was resolved, on the motion of Messrs. Barratt and Mueller, "That steps be taken to prevent the use of secondhand cases on the Adelaide market."

At the conclusion of conference business, Mr. Seary asked delegates to

affirm their appreciation of the efforts of the president and secretary throughout the year, the president had at all times demonstrated his readiness to further the interests of the Association.

Mr. Metters acknowledged the vote and expressed his willingness to do whatever was in his power to improve conditions for the citrus grower.

### CITRUS GROWERS' CONFERENCES.

#### Should They be Held in Cities or Country Districts?

The suggestion of the Murray Citrus Growers' Co-operative Association, that conferences of the Victorian Central Citrus Association be held in a Murray river district has much to commend it.

A conference in a country district has the right "atmosphere." Away from the rattle of the trams and trains of the big city, delegates come to the conference room prepared to give undivided attention to the matters before the conference.

Apart from the resolutions, the social aspect is of equal importance. Amongst other sections of fruitgrowers, the holding of conferences in country districts has won complete and unqualified approval. Growers come into personal contact right where the fruit is produced, and practical hints of great value are given and gained.

Men come to realise the difficulties of certain districts, making for a spirit of tolerance and understanding. Friendships of lifelong value are formed.

In the country the visitors get away from the rush and unreality of town life. Besides the district visited always rises to the occasion: committees are formed to deal with the varied matters necessary for holding the business and social aspects: this infuses a warm interest. It brings out the best in all who have a share in the enterprise. The benefits accruing to the district visited cannot be calculated. The experience amongst the deciduous fruitgrowers, is that districts actually compete for the honor of holding the conference in their own particular area. This friendly rivalry has much to commend it.

The V.C.C.A. will probably find its hands strengthened in a marked degree by holding its conferences in the several producing centres.

## The Fertilising of Citrus Trees.

### Practical Hints on Manuring.

#### Valuable Tests in U.S.A.

**T**HE subject of manures for Citrus trees is of great importance in Australia, and the following comparative experience from California will be found of interest.

In Bulletin No. 283, issued by the Berkeley Agricultural College, California, Mr. Robt. W. Hodgson gives much valuable information, of which the following is a summary:—

1. In California, Citrus trees require fertilisation if crop production is to be maintained.

2. Nitrogen is the only element and organic matter, the only other material which has been demonstrated to give measurable improvements in yield and tree health.

3. The application of phosphorus or potassium has not been shown to be necessary or beneficial.

From two to three pounds of nitrogen per tree per year is ordinarily the most profitable use of this element, although larger amounts may produce more fruit.

5. No one source of nitrogen has been shown to be best, but the evidence is conclusive that part of it should be supplied in bulky organic form.

6. The evidence available at this time indicates that at least half of the nitrogen should be supplied from bulky organic sources.

7. With bearing trees there is evidence to indicate that a part of the nitrogen can be supplied with advantage in concentrated form.

8. The nitrogenous fertilisers may be divided into two groups—those quickly available to the trees, and those slowly available. Choice between these groups depends principally upon the time of application.

9. In general the bulky organic materials, with the exception of the quickly available forms, should be applied in the fall.

10. The concentrates, on the other hand, should be applied in the spring.

11. Deep application, where possible, preferably by ploughing, is recommended.

12. The winter covercrop has a pronounced fertiliser value in the young Citrus orchard, and in the older orchard, a replacement value of three to five tons of manure.

13. The use of lime, gypsum, sulphur, and other soil amendments is rarely productive of measurable benefits.

14. Peat cannot be regarded as a satisfactory manure substitute, since

little or none of its nitrogen is available, and its organic matter is not readily decomposed.

15. Fertilisers should be purchased on the basis of their unit cost for the plant nutrients desired. In the case of the concentrates, nitrogen is the effective constituent; in the bulky organic materials, nitrogen and organic matter.

16. As reported by recognised authorities, the general fertiliser experience with orchard fruits in the United States is similar to that with Citrus fruits in California, measurable improvements being associated almost invariably with the organic matter and nitrogen.

2. For young bearing trees grow a winter covercrop and apply bulky organic materials to supply a total of two pounds of nitrogen per tree per year. This treatment should suffice until the trees are 12 to 15 years old.

3. From this time on apply two to three pounds of nitrogen per tree, approximately half of which should be from bulky organic sources and the remainder from concentrates.

4. Use lime and other soil amendments only where trials show definite measurable improvement in tree health or yield.

## Planting Citrus Trees.

### Some Necessary Precautions.

Citrus growers who are planting just now should take great care that the roots of the young trees are not allowed to become dried out by exposure to the sun or air between the time they are lifted in the nursery and the time they are planted. It is a good plan to dip the roots in a puddle of clay before packing to reduce the loss of moisture while in transit (states the N.S.W. Department of Agriculture).

The trees should not be planted deeper than the depth at which they stood in the nursery, and in shallow soils where top-dressing is practised they should be placed rather shallower. When planting is completed, the ground should be ploughed up to each row of trees.

The ends of all damaged roots should be cut off smoothly, and the roots well spread in the hole and covered with loose moist soil, which should be pressed tight around them. If the weather turns dry after planting, the trees should be irrigated or (if irrigation be not possible) each tree should receive a couple of buckets of water. This should be applied by forming a basin round the tree, and after the water has soaked away filling the basin in with dry soil. The tree should be cut back after planting.

If the leaves along the stem drop, as they often do, the bark should be protected from the hot sun with bagging or other covering.

In coastal districts, it is often possible to reduce the initial expenses of planting a Citrus orchard by interplanting crops like Peas, Beans, Tomatoes, Turnips, and Potatoes; Passion-fruit are often grown between rows of Citrus trees, but none of these things should be attempted without liberal manuring, good cultivation, and an assured rainfall or irrigation.

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17. The soil management and fertiliser programmes should supplement each other if maximum benefits are to be derived from expenditures for fertilisers.

### The Fertiliser Programme in the Citrus Orchard.

1. In the young orchard grow covercrops (winter always, late summer if possible) but keep them under control. This treatment alone is usually sufficient for the first seven or eight years.



## Improving Citrus Fruit.

### Many low-grade Lemons.

Investigations into the class of Citrus fruit produced in the Auckland and North Auckland districts, has shown that there is a considerable quantity of second-grade fruit produced, and that very little of it is really first class. Many of the orchards do not send any really first-grade Lemons to the markets, and it

there would have to be careful selection, and co-operation with the nurserymen before any great improvement could be effected. Since the inception of the Citrus pool, which handled all the fruit going on the market, it had been possible to get accurate data together, and this showed that the position was very much worse than had previously been supposed. The proportion of correct type fruit was altogether too low, and from some of the groves none at all was sent forward.

The seedy fruits of the Poorman Orange had also shown a great need for strict selection to preserve the original type. A conference had recently been held between the Citrus Association, the Nurserymen and the Institute of Horticulture, and there a working plan had been put forward for the selection of buds, and the supply of these to the growers. The committee hoped that the growers would realise the seriousness of the position and would lend every support in the effort to place the industry on a better footing.

Members expressed the opinion that the report was a very sound one, and that it had correctly gauged the position. They considered that if growers would assist with a view to improving the type of Oranges and Lemons produced, a very great difference would be noticeable within the next two years. One speaker said that previously he had been somewhat sceptical about the result of bud selection, but he was now convinced that although it would not do all that was needed, it would go a long way towards effecting the necessary improvement.

The report was unanimously adopted, and every effort is being made to have growers endorse the policy adopted by the nurserymen.

### THE LITTLE LEMON.

The average housewife little realises to what a variety of uses an ordinary Lemon may be put, states the "California Cultivator."

Embroideries, laces and linens which have become yellowed are bleached snowy white by boiling in water which has been mixed with blueing and Lemon juice.

Rubbing the fingers with Lemon juice removes the odor of fish or Onions.

Lemon juice for ink spots or rust stains has been a valued recipe for years.

A Lemon dipped in salt is an excellent brass polisher.

A teaspoonful of Lemon juice in a cup of warm water removes stains

from the nails and fingers as a preparatory to manicuring.

Lemon juice is almost a necessity after a shampoo to remove the curd of the soap from the hair and leave it glossy and fluffy.

Lemon juice brightens blonde hair in all shades to Titian red.

Lemon juice in dishwater cuts grease and saves the housewife's hands. Cut halves of the fruit from which most of the juice has been extracted may be used for this purpose.

These uses as well as the constant demand for Lemon juice in flavoring

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has become evident that bud selection will have to be adopted in order that the standard may be improved. A special committee connected with the Auckland Nurserymen's Council has been going into the matter, and its report provides an interesting summary of the present position.

The committee's report said that for a long time it had been recognised that much of the Citrus fruit which was going out on to the market was not up to standard, and that

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Agents Wanted in—  
MELBOURNE, HOBART, NEW  
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make it one of the most important  
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IMPERIAL FRUIT SHOW.

London, Oct.-Nov., 1926.

Mr. J. F. Tamblin, Secretary of the Imperial Fruit Show, London, writes to the "Fruit World," under date, January 25:—

"You will be interested to hear that at a meeting of my committee, held last week, it was decided to hold the next Imperial Fruit Show at Holland Park Rink, London, between October 29 and November 6, 1926."

# Queensland.

## Seasonable Notes and Comments.

THE beneficial change in weather conditions, though belated, has improved orchard prospects to an appreciable extent, though the effect of prolonged drought is still evident.

Early Citrus fruits are being exported and marketed locally, though local supplies have been very much on the "green" side. A maturity standard for Oranges and Mandarins, not exceeding 1.5 of citric acid, was gazetted, but subsequently countered by a Ministerial statement that application would not be enforced where fruit was sold to be utilised for drinks; as fully 70 per cent. of the fruit offered for sale was evidently below the standard, a huge demand for citric acid from immature fruit must have been anticipated.

The summer crop of Pineapples has been disposed of at a rate more satisfactory to the growers than those of previous years, when returns did not reasonably compensate for the labor entailed.

The Mango crop throughout the State was very light, and formed a ready market. Custard Apples are below the average in quantity, but the quality has been well maintained.

Bananas have been in fair supply, and prices well maintained, in fact, prices of all fruits this year have been in advance of 1925.

The fruit fly, though at times most persistent, was more moderate in its demands than usual, but is endeavoring to retrieve its reputation amongst early Mandarins. For some unexplained reason, Harvey's Lure has not given satisfaction in Citrus orchards—where previously effective—suggesting some deficiency in composition. The fallacious idea that the fly was not migratory has now been dropped by the scientists and others engaged in connection therewith at Stanthorpe, and the absurd regulation regarding cold storage of fruit for that district lapsed. Those who were so assiduous in endeavoring to demonstrate that the Departmental officials' appreciation of the position was entirely wrong, will possibly now admit that the mis-conception was entirely theirs.

Orchard work, owing to adverse conditions, has been restricted; spraying would not well be practised during the hot dry months, consequently

scale insects were present in profusion in many Citrus orchards. It is recognised that spraying is not entirely satisfactory, and though cyaniding was fairly general some years ago, the cost of outfits and incidentals, also the conditions of working with hydro-cyanic acid gas, were responsible for its almost entire absence.

Various trials have recently been made with Cyanogas, and most satisfactory results have followed. With a warm climate and high humidity, further experimenting is necessary to determine the maximum temperature and minimum dosage which will give satisfactory results. It is anticipated that early autumn applications will give best results and ensure clean fruit.

The citriculturist has a multiplicity of natural enemies to contend against and where land rather depleted of plant food is not rectified as required, a general complaint is raised about second and third grade fruit. Owing to scattered areas, the amount of official instruction which can be accorded to individual growers is limited. To overcome the difficulty so far as possible demonstration plots are being established in different centres where the results of the applications of means will be evident to those concerned.

The longevity of trees grown under different conditions is a feature that growers are apt to overlook, and reason that if reasonably tended they should last indefinitely. There are instances of productive trees in the State about 50 years old, but an estimate average of half that age would probably be excessive.

A predominating feature in many orchards is the number of varieties included, many of which are unprofitable. Recommendations have been made that these be worked over, but there is little evidence of effect being given thereto.

For future guidance it may be mentioned that Oranges, Joppa, Sebina, Valencia, Byfield Seedless, and where irrigation is practised or rainfall consistent, Navels (Thompson's or Washington), give most satisfactory results, and amongst Mandarins, Emperor (under more tropical conditions), Glen Retreat, and its progeny, Sovereign, Scarlet and King,

with Excelsior in alluvial lands, leave no room for profitable extension. Also the fact that lemons will not be a success in coastal Queensland should not be lost sight of.

Undoubtedly, our best Citrus lands of southern and central parts of the State are inland, where ample supplies of water exist for irrigation. The most ardent advocate of coastal scrub lands (volcanic), must admit the superiority of the Gayndah product from alluvial areas of granitic origin.

## Personal.

Mr. H. W. Davey, late Senior Orchard Supervisor of the Horticultural Division of the Department of Agriculture, has been promoted to the position of Chief Orchard Supervisor in succession to Mr. P. J. Carmody, who recently retired from the Public Service in Victoria.

Mr. Sydney Stott, who represents the classification of "Orchardist" in the Rotary Club of Melbourne, is one of the delegates of the club to the Pan Pacific Congress of Rotarians, to be held at Honolulu in the last week of May. Membership in Rotary is confined to one representative of each profession or trade, and 150 professions or trades are represented in the Melbourne club.

Members of the Fruit Inspectors' Association last week presented Mr. W. J. Allen, State Fruit Expert, with a travelling rug and an umbrella, on the eve of his retirement from the Public Service in N.S.W.

Mr. V. Ellingworth, who for several years has been in close touch with the fruit trade, canning and fresh, and who is familiar with the markets of the old world, and recently returned from England, is now operating in the export trade, and is prepared to buy large quantities of fruit products for straight sale f.o.b. or c.i.f. and e., or on consignment.

Mr. Ellingworth's headquarters are at Chancery House, 440 Little Collins Street, Melbourne. He would be glad to hear from growers who desire to export their fruit, and others interested in the export trade.

"Please find enclosed, two years' subscription to the "Fruit World." Thank you for forwarding so promptly every month, your much-valued paper."

(Sgd.) ROBT. PORTWINE.  
Barker's Creek, Vic., 20/3/26.



# Australian Dried Fruits

Notes and Comments.

## DRIED FRUITS—SALES IN LONDON.

In a cable to the Chairman of the Dried Fruits Control Board (Mr. W. C. F. Thomas), the London Agency of the Board stated that the following sales of dried fruits have been recorded with the Agency for the period from March 26 to April 8, 1926:—

Total.—80 tons, average price £24/15/- per ton.

### Lexias—

|     |       |    |      |     |      |
|-----|-------|----|------|-----|------|
| 671 | boxes | at | 20/- | per | cwt. |
| 998 | "     | "  | 21/- | "   | "    |
| 170 | "     | "  | 21/6 | "   | "    |
| 80  | "     | "  | 22/- | "   | "    |
| 228 | "     | "  | 23/- | "   | "    |

Total.—53 tons, average price £20/19/6 per ton.

## DRIED FRUITS IN N.S.W.

### Control Act Desired.

At the monthly meeting of the Curlwaa Fruitgrowers' Association, held in the Curlwaa Hall recently, a letter was received from Mr. P. Malloch, of the Irymple Packing Company, enclosing a draft statement of the case for State legislation in connection with the dried fruits industry in New South Wales.

Concisely, the legislation asked for is to provide that every grower of dried fruits in the State shall bear a share of export beyond the Commonwealth, and that the necessary board and officials to enforce the provisions of such legislation be provided for.

## THE "SUN-RAYSED" EXHIBIT AT THE DUNEDIN, NEW ZEALAND, EXHIBITION.



A very attractively displayed exhibit, which has materially assisted to firmly establish the "Sun-Raysed" brand of Dried Fruits on the New Zealand market.

Good sales were made of sample packets of the various lines, and 10,000 booklets, extolling the virtues of our fruits, and giving some cogent reasons for inter-Dominion trade, were distributed amongst the trade and public.

(Illustration by courtesy "Dried Fruits News.")

### Sultanas—

|     |       |    |      |     |      |
|-----|-------|----|------|-----|------|
| 99  | boxes | at | 58/- | per | cwt. |
| 61  | "     | "  | 65/- | "   | "    |
| 206 | "     | "  | 67/- | "   | "    |

Total.—Nine tons, average price £64/8/- per ton.

### Currants—

|      |       |    |      |     |      |
|------|-------|----|------|-----|------|
| 200  | boxes | at | 20/- | per | cwt. |
| 225  | "     | "  | 21/- | "   | "    |
| 61   | "     | "  | 24/- | "   | "    |
| 1774 | "     | "  | 25/- | "   | "    |
| 216  | "     | "  | 25/6 | "   | "    |
| 500  | "     | "  | 26/- | "   | "    |
| 250  | "     | "  | 27/- | "   | "    |

Inclusive of the foregoing, the total sales recorded with the London Agency of the Board since the opening of the 1925 season, are as follows:—

Sultanas.—12,203 tons, average price £68/4/- per ton.

Currants. — 5,711 tons, average price £31/4/- per ton.

Lexias.—3,171 tons, average price £32 per ton.

## CANCER RESEARCH.

### East Less Meat: Eat More Fruit.

There is much in the press these days on the subject of cancer research. All honor to the men of science who are devoting their lives to discovering the cause and prevention of this dread scourge.

The latest advices seem to indicate that improper diet is a big contributing factor; people eat too much meat. The simpler the diet the better for the health of the race. Fresh fruits are particularly healthful.

# VICTORIA.

Crop Reports — Growers Meetings — Export of Pears and Grapes.

Dedicious; Vines; Citrus.

Review by Department of Agriculture.

**I**N an interesting review of the Victorian fruit crops up to and including March, 1926, the Superintendent of Horticulture, Mr. J. M. Ward reports as follows:—

## Deciduous Fruit.

The recent steady warm rain has done an immense amount of good. Owing to the absence of high winds, the fruit has been considerably improved in respect to size and color, and consequently the percentage of marketable fruit much increased.

Abnormally high prices are ruling for good fruit, and, despite losses sustained owing to the dry season, growers are having a most successful year.

In most orchards Codlin Moth has been successfully combated with arsenical sprays. In some instances too long a period between sprays resulted in a rather high percentage of infection. In a few cases, growers discontinued spraying in January owing to the arsenic scare, and as a result infestation was bad.

## Viticulture.

After a rainless February, March continued dry until Saturday, the 20th, when rain fell generally throughout Victoria. In the north the fall varied from over two inches at Rutherglen to just under an inch at Mildura. Merbein and Red Cliffs, quite close to Mildura, only got about half an inch each.

The break in the weather interfered somewhat with drying operations, especially with cold dip processing, the lower temperatures, especially at night, retarding evaporation. Until the change, conditions were ideal for drying, but for dust, which has been troublesome on some greens. As regards yields, Sultanias are somewhat short (see previous reports), Gordos are about normal

Zantes show a better yield and better quality than last year, whilst Doradillos are on the short side.

A feature of the season is the fine quality of Waltham Cross, and other Grapes abundantly displayed in metropolitan and suburban fruit shops and barrows.

In the North-East (not irrigated), the dry summer has much reduced the vintage. Recent rains have been too late to be of use, though they have checked shrivelling of the berries. A reduction in Baume gravity of from half to one degree, has been a common result of the rain. Many vineyards had almost completed vintage before the change.

Quality is generally very good, though gravities, as a rule, are not as high as might be expected in so warm a season. Many of the late sorts now being crushed show little over 12 deg. Beaume. The dry summer has restricted growth. It must be remembered that sugar comes from the air, hence limited foliage goes not make for high gravity. Earlier sorts, such as Syra, etc., have frequently reached 16 deg., 17 deg., and over. The yield is very erratic. Some complain that they have not vintaged 40 per cent. of the 1925 crop, whilst others claim 60 per cent. to 70 per cent. and over. Thorough tillage has shown the usual beneficial results. Taken as a whole, North-Eastern vineyards should average about 60 per cent. of last year's yield, which may be considered a normal one.

## Citrus.

Bounteous rains have fallen right through the irrigation areas, and in other parts of the State. As a consequence much good has resulted to the Citrus crops everywhere. The shortage of water in the irrigation areas was being severely felt in many districts prior to the rain. Happily, all has ended well and the citrus crop for the coming season will benefit materially.

Fumigation for Red Scale is proceeding satisfactorily, and to date fully 20,000 trees have been treated at Mildura, Murrabit and Shepparton.

## MELBOURNE MARKETS.

### Proposals to Remove Western Market.

Consideration is being given to the possibility of the closing of the Western Market and its transfer to the Victoria Market.

Naturally there is a big matter of policy involved, and the many details require close consideration. However, the subject is being discussed in view of the fact that the continuation of the electric tram in William Street from Collins Street to Flinders Street, may probably cause traffic congestion on account of the fruiters' waggons which assemble there.

On the other hand, the idea of the transfer from the Western Market site is opposed by several agents, seeing that the present site was granted for market purposes, and it is claimed that the erection of offices

is unwarranted, and that if the space now used for offices were devoted to market purposes, in accordance with the charter, there would be ample room for fruit marketing for the next 50 years.

This matter is one of interest to all producers, and further negotiations will be awaited with considerable interest.

**Success in Advertising.**—The Crowborough members of the East Sussex Fruitgrowers' Association recently conducted a campaign to push the sale of Crowborough Tomatoes and Cucumbers. The cost was met by a levy on members according to the amount of glass they had. Of Tomatoes, 7,400 doz. lbs. were dealt with, and Cucumbers 7,100 dozen, and the total cost worked out at a penny and one-twelfth per £1 value.—"H.T.J."

## EXPORT OF PEARS.

### Big Prices in England.

Growers at Doncaster, Victoria, express pleasure at the success of the Williams Pears shipped to England this season. One grower sent 100 bushels, and has received a cheque for £87 nett, after paying all expenses. Another grower sent 100 bushels in half-cases, and has received a remittance for £97 nett.

## - LEMONS -

We are the largest Buyers  
in Australasia

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## What is the nitrogen content?

Nowadays the merits of a complete fertiliser (one containing nitrogen, phosphoric acid and potash) are based on the nitrogen content in the form of

## Sulphate of Ammonia

for it is generally recognised what a big part nitrogen plays in securing bigger and better yields. Sulphate of Ammonia is the best and cheapest nitrogen fertiliser available, and there you have the reason why it figures so prominently in a really good complete manure.

Write for free handbook "Productive Fertilisers" to

THE AUSTRALIAN SULPHATE OF AMMONIA PROPAGANDA COMMITTEE.  
360 Collins Street, Melbourne.

### VICTORIAN FRUITGROWERS' CENTRAL ASSOCIATION.

#### Executive Meeting.

A meeting of the executive of the Victorian Fruitgrowers' Central Association was held at 325 Collins Street, on April 8. There were present, Messrs. Mock (President), Lang, Tully, Thomas, Bailey, Thiele, Wallace and Secretary. Apology from Mr. Lenne.

**Suggested Re-organisation.**—The report of the sub-committee was submitted, recommending alterations as follows (these suggested alterations are for discussion at the forthcoming conference at Portland).

1. **Name.**—Victorian Fruitgrowers' Federation.

2. **Objects.**—To secure the efficient organisation of the fruitgrowers of Victoria by means of sectional and district associations. (Then to follow list of objects as in printed constitution.)

3. **Membership** (as per printed constitution), but to provide that the maximum fee payable by affiliated associations be £10, and that conference have the power to levy up to 2/- per member in any one year, and

pro rata for sectional and trading bodies.

4. **Delegates.**—The maximum number of delegates from any one association to be seven. (Maximum number was five under the old rules.)

In the election of Executive, sectional groups may nominate their own representatives, and conference in appointing the Executive, is asked to elect members according to such grouping. The Executive to consist of five members, but where sectional groups have any matters of importance to bring before the Executive, the attendance of their representatives at Executive meetings is invited.

The report was adopted for presentation at Portland, and it was decided to make the forthcoming convention a general conference of fruitgrowers, whether affiliated with the Central or not.

**State Advisory Board.**—The Secretary read a letter from the Minister for Agriculture, dated March 17, stating that he had agreed to the inclusion of one extra delegate in the Apple and Pear section. The date of nominations for the Advisory Board had been deferred from February 22 to March 12. These nominations were then considered, and as the Associations which replied had given preference to Messrs. J. W. Aspinall,

J. W. Bailey and J. H. Lang, these had been appointed.

Regret was generally expressed that there had been no election, as promised.

The Secretary read a letter from the Quantong Fruitgrowers (manager, Mr. C. H. Jost), stating that at a recent meeting, 45 growers being in attendance, the following resolution was unanimously carried:—

"In the opinion of the Quantong growers, the fruit industry is seriously menaced by the unwarranted interference of such schemes as the Marketing Organisation, tried out last January and February. We lost shillings per case through the indiscriminate issue of price lists to the public, through the railway station masters, such lists, we understand, being distributed free, on top of the fact that £2,000 was lent or given by the Ministry."

**Portland Conference.**—The President said that the dates, May 19 to 21 had been deemed most suitable. Gippsland growers requested the opening date to be May 25, after consideration of all factors, and remembering that our Portland hosts desire the conference as early in May as possible, it has been decided to open the Conference on Wednesday, May 19.

Decided to endeavor to arrange for papers and demonstrations as follows:—"Spraying and Trapping to Control Codlin Moth," J. H. Lang, Harcourt; "The Organisation of the Agricultural Department and the Horticultural Division," J. M. Ward, Superintendent of Horticulture; "Report of Fruit Marketing Organisation," Mr. Cook; "Application of Scientific Principles to Fruitgrowing," A. V. Lyon, Merbein; "Interstate Fruit Trade," F. J. Churches, Kyabram; "Demonstration, Canadian Case," Mr. Lipscombe; "Soil Bacteria," F. Thomas, Bunyip; "The Merchandising of Fruit," W. Murray.

Mr. Thomas stated that the two following resolutions would be submitted to the conference:—

"That conference congratulates the Federal Government upon its decision to set aside £100,000 to reorganise the Institute of Science and Industry, and urges the need of a scientific examination of the problems relating to the cool storage of fruit, and the control of insect pests and fungus diseases."

"That conference urges upon the State Government the need for the establishment of the Rural Bank in the interests of country industries."

**Arbitration Case.**—A letter was received from the Secretary of Producers' Defence Fund, stating that of the £186 contributed to the fund by fruitgrowers, £170 had been paid towards Fruitgrowers' Arbitration Court expenses. The trustees were, however, prepared to contribute on the basis of £1 for every £1 raised by the Victorian Fruitgrowers' Central Association, the total cost to the Trustees not to exceed £35.

It was decided (motion, Messrs. Lang and Wallace), that affiliated Associations be asked to contribute towards the expenses of the Arbitration case at the rate of 1/- per member, and that claim be made to the Trustees of the Producers' Defence Fund for £1 for each £1 collected.

It was further decided, that the Executive incur no further liability in regard to Arbitration cases.

#### VICTORIAN FRUITGROWERS' CONVENTION.

Portland, May 19 to 21.

Big Gathering Expected.

ALL fruitgrowers in Victoria, whether affiliated with the Central Association or not, are invited to attend the Convention to be held at Portland from May 19 to 21.

Preparations are being made for

the welcoming of the delegates and visitors.

The agenda paper is now being compiled, and growers are asked to send in their resolutions and names of those attending, as well as additional subjects for the agenda paper, as soon as possible.

### SHIP YOUR FRUIT TO Gerald Da Costa



Head Offices—  
**Floral Hall, Covent Garden,  
LONDON, W.C.2**

*Importers and Distributors of  
all kinds of English, Colonial  
and Foreign Market Produce*

#### BRANCHES:

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8, Russell Street.  
524, Central Avenue.  
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Tel.: Gerrard, 868 and 5786.  
Telegrams: "Geracost, London."  
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Spitalfields Market, E.1, and 54 Brushfield Street, E.1.  
Telephone: Avenue 8804.  
Telegrams: "Spitacost, London."  
Apple Warehouses:  
Church Passage, Spital Square, London, E.1.  
3, 4 and 5, The Arcade, Borough Market, London, S.E.1.  
Telephone: Hop, 3373.  
Telegrams: "Borocost, London."  
G.N.R. Potato Market, King's Cross, N.1.  
Telephone: North 1482.  
Telegrams: "Kincrocost, London."  
13 & 17, Victoria Street, Liverpool.  
Telephone: Central 888.  
Telegrams: "Geracost, Liverpool."  
(Facing Commercial Sale Rooms.)  
Deansgate, Manchester.  
Telephone: Central 7156.  
Telegrams: "Geracost, Manchester."  
17, Humber Street, Hull.  
Telephone: Central 4041 Y.  
Telegrams: "Geracost, Hull."  
Southampton Docks, (Facing No. 45 Shed).  
Telephone: Southampton 2610.  
Telegrams: "Geracost, Southampton."  
Eclipse Yard, Westgate, Mansfield.  
Telephone: Mansfield 440.  
Telegrams: "Geracost, Mansfield."

It is expected that the Portland Conference will be productive of much good for the industry.

Among the principal items are the organising of the industry in sections, combining in what is proposed to be termed the Victorian Fruitgrowers' Federation.

There is ample accommodation in the historic town of Portland, for all who are attending.

In addition to the business items, an interesting social programme is being arranged.

Further details may be obtained from the Secretary, Mr. R. E. Boardman, 9 Queen Street, Melbourne.

The preliminary agenda is as follows:—

Official opening.

Annual report and financial statement.

**Fruit Export.**—Apples, Pears, Citrus, Grapes, and resolutions relating thereto.

**Cool Storage and Research.**—That this Convention congratulates the Federal Government upon its decision to set aside £100,000 to reorganise the Institute of Science and Industry, and urges the need of the scientific examination of the problems relating to the cool storage of fruit and the control of insect pests and fungus diseases.

That the Federal Government be urged to establish a plant quarantine station, through which new and valuable varieties of plants and fruits can be imported in quarantine for distribution when proved clean.

That this Convention requests the State Government to strengthen its Entomological Department, and carry out research work to discover the best means to combat the various orchard pests, and that sufficient funds be made available to secure a practical result.

**Interstate Fruit Trade.**—Improvements possible, and resolutions relating thereto.

**Address.**—"Interstate Fruit Trade," Mr. F. J. Churches, Kyabram.

**Organisation in the Fruit Industry.**—Rules and constitution of the proposed Victorian Fruitgrowers' Federation.

**State Fruit Advisory Board.**—Report of Fruit Marketing Organisation, Mr. B. S. B. Cook.

(a) That, while thanking the Minister of Agriculture for increasing the representation of fresh fruit growers on the State Fruit Advisory Board by an additional member, we consider the representation to be still inadequate, and that there should be four members instead of three.

(b) That such members should be elected at the Annual Convention.

(c) That we regret the Minister of Agriculture failed in his promise to conduct an election for the appoint-



ment of representatives in the fresh fruit section of the Advisory Board.

#### Bounty on Canned Fruit Export.

#### The Arbitration Case.

**Rural Bank.**—That this Convention urges upon the State Government the need for the establishment of the Rural Bank in the interests of primary industries.

**Fruit Drinks and Essences.**—That this Convention urges the State Government to carry legislation or pass regulations making it compulsory for fruit drinks and confectionery purporting to contain fruit juices to be made from pure fruit, and not substitutes therefore.

That this Convention requests an

adjustment of the tariff and excise provisions, so that more Australian fruit can be used locally in the manufacture of fruit essence.

**Institute of Horticulture.**—That this Convention cordially approves of the formation of an Institute of Horticulture and the inclusion of a Pomological Committee.

#### EXPERIMENTAL SHIPMENT OF OHANEZ GRAPES.

The Minister of Agriculture and Markets (Col. Bouchier, M.L.A.), together with the Director of Agriculture (Dr. S. S. Cameron), the Horti-

cultural Superintendent (J. M. Ward), and the Viticulturist (F. de Castella), made an inspection, at the Government Cool Stores, of a shipment of Ohanez Grapes that are to be shipped to England in one of the experimental chambers of the s.s. "Moreton Bay," which left Melbourne on April 14.

In all, there will be 114 cases in two different types of cases; one is the Citrus case, as used in New South Wales, the dimensions of which are 20 inches long, 10 inches deep, and 11½ inches wide; the other case is the one which has been so much used in the export of Grapes from Victoria and Western Australia, i.e., the

## HARVEY Single Furrow Orchard Plows



Ploughing On with Harvey Single Furrow Plow.

The Harvey Single Furrow Orchard Plow, with Shifting Handles and Head, will plow on or off right to the butts of the trees.

In plowing away, the strips between the trees can be cut right out with this Plow, leaving no strips to dig, and doing away with the necessity of cross plowing, strip digging or chipping.

Guaranteed to do good work.

#### MADE IN THREE SIZES—

- No. 1. Light, approx. weight, 140 lbs.
- No. 2. Medium, approx. weight, 150 lbs.
- No. 3. Strong, approx. weight, 160 lbs.

Fitted with Patent Shifting Handles and Head Rack.

These Plows stand out on their own. Easy to hold. Well balanced. A nice easy running sweet working Plow.

The Nos. 1, 2 and 3 Single-Furrow Orchard Plows take the Hornsby D Share. Each Plow being supplied with one extra chilled D Share and fitted with gauge wheel, and knife coulter. Circular Coulters are supplied extra if required.

A Clean Worker in any Soil.

#### GOOD DRAUGHT. EASY TO HOLD.

Enclosed please find cheque for the No. 2 Single Furrow Orchard Plow, which came to hand last Friday, and has given me entire satisfaction. I have had a fair amount of experience with other makes of Plows, but can safely say that your Plow is second to none in draught, and very easy to hold. You may use this letter if you wish.

(Sgd.) P. PAPWORTH.

Bulla, Vic.



Harvey Single Furrow Orchard Plow.

Write for Catalogs of complete range of Orchard, horse and tractor pull Implements

**D. HARVEY** IMPLEMENT MANUFACTURER  
— BOX HILL, Vic. —

$\frac{3}{4}$  bushel case—22 $\frac{1}{2}$  inches long by 7 inches wide by 13 $\frac{1}{2}$  inches deep.

The Grapes are of excellent quality and should carry well. Most of them are grown in Merbein; others came from Shepparton. All the fruit was, of course, packed in coarse granulated cork, which had been treated by way of being heated, and sulphured, with a view of destroying any fungus that may have been in the cork, for on being examined it was found that destructive fungi was associated with the cork in sufficient quantity to cause serious damage to the Grapes, and which may have been the cause of the past failures in shipment of Grapes to England. Grapes are also being shipped with untreated cork and non-sulphured Grapes as controls upon the treated.

The cases were made so that little or no ventilation exists, so as to re-

## TASMANIA

We are the Leading Australian Firm of  
**FRESH FRUIT EXPORTERS.**  
**JAM MANUFACTURERS** (IXL Brand), **FRUIT CANNERS, HOP FACTORS** (owning the largest cool stores for this purpose in the Commonwealth).  
Supplies of Corrugated Strawboard, Genuine Sulphite Paper, Nails and best Packing Materials available at all times.  
Sole Distributing Agents for the Southern Tasmanian Associated Manufacturers of Evaporated (dried) Apples.

Agents for—  
Federal Steam Navigation Co. Ltd.,  
Scottish Shire Line of Steamers,  
Osaka Shosen Kaisha, London  
Assurance Corporation.

Correspondence Invited.

**H. JONES & CO. LTD.,**  
HOBART

semble, as far as possible, the barrels in which Ohanez Grapes are shipped from Spain. A number of the treated and untreated cases of the fruit are being held in cool stores in Melbourne, and will be opened up and examined at the time of arrival of the Grapes shipped to England, so that a comparison of the various lots can be made.

If, as is expected, the shipment turns out a success, no doubt greater quantities will be shipped under similar conditions by private enterprise in the future.

A woman had to be inoculated against typhoid. She was unable to keep a dinner appointment she had made for the next day, and sent her daughter, aged eight, to make her excuses.

"And what did you say?" she asked the child on her return. "Exactly as you told me," was the reply. I said—"Mummy can't come because she was intoxicated yesterday and has a bad headache."

## FRUIT MARKETING ORGANISATION.

Conference at Melbourne on May 4.

A conference has been called by the Fruit Marketing Organisation of the Victorian State Fruit Advisory Board, to be held at Melbourne on May 4. Invitations were sent to all fruit-growers' organisations throughout Victoria, including packing houses (co-operative and proprietary) and cool stores' associations. The conference is to be held at the Employers' Federation Rooms, 325 Collins Street, and is to be opened by the Minister, Hon. M. W. J. Bourchier.

The report sets out in detail the doings of the Marketing Organisation, and expresses the firm conviction that by better organisation of the industry, there will be a very much greater consumption of fruit. The report further recommends that "the necessary finance for the scheme be provided by way of an orchard registration fee or case levy or fruit stamp under an Enabling Act, which could be so framed as to bring under its operations only those sections of the fruit industry which agree to its provisions, and that such provisions set out that all money raised under the Act, less the cost of collection, should be made available by the Government to the sections of the fruit industry concerned."

A report was included from Mr. W. E. Branson, Market Representative, giving interesting details.

## THE CAREFUL CROSSING CAMPAIGN.

The Victorian Railways Department is conducting a Safety First Careful Crossing campaign, and the following paragraphs from the official propaganda are worth quoting:—

The sensations which suddenly swoop down on the engineer who sees that he must hit a motor-car trying to "beat the train across" are as terrible as they are indescribable, says a driver on one of our express trains.

To see women and children in a motor-car which he cannot avoid hitting; sitting there innocently, as death grimly hovers on the track, all through the carelessness of some driver, who has failed to look out for trains, or who, perhaps, wants the thrill of shooting across the track before the iron giant, is, this engine-driver declares, a hair-raising experience.

Railway statistics show that last year there were 38 casualties at level crossings in Victoria. "Do you know that if you are not careful you are apt to be the next victim"—thus he warns all road users.

The Railways Commissioners are doing their best to eliminate accidents

at railway level crossings. They are spending up to £50,000 annually in the provision of warning devices and the removal of trees, houses, and other obstructions of the view of approaching trains. Still accidents occur and will continue to do so until the public realises that any time may be train time at a railway crossing.

## The Ellis Fruit Grader.

Most fruitgrowers nowadays are convinced of the importance of grading their fruit, in order to obtain the best prices. The "Ellis" Fruit Grader, advertised in another column, has been widely recommended by users, the manufacturers having received testimonials as to its efficiency from fruitgrowers in all parts of Victoria and New South Wales. The grader may be used for all classes of fruit, Apples, Oranges, Peaches, Apricots, Plums, Pears, Lemons, etc.,

## HAMBURG

(GERMANY).

## Ph. Astheimer

And Sohn,

Fruit Brokers . .  
and Auctioneers

(GERMANY)

Established 1863.

Largest receivers of Australian,  
Tasmanian, and American  
APPLES.

Foreign Apples a Speciality.

and appears to deal with all in an equally satisfactory manner. It is easy to operate, durable, and does not bruise the fruit. It is also stated to be a great labor-saver, and may be used equally well in the shed, in the orchard, or in the big packing establishments.

Enquiries should be addressed to The Ellis Fruit Grader Co., a'Beckett and Elizabeth Streets, Melbourne.

## Apples For Cricketers. Good Advertising "Stunt."

The services of the Australian cricketers, now in England, were freely rendered to advertise Australian Apples. They took part in various "stunts," and a big sign was displayed—"An Apple a Day Takes the Ashes Away," the Captain, Mr. Collins, stated that Apples were splendid to train on.

It is certain those who do not have the good fortune to be picked in the Test Match will be sportsmen enough not to get the pip.



## Plums for Export.

In reply to an enquirer the following information is kindly furnished by Mr. J. M. Ward, Superintendent of Horticulture, Melbourne, thus:—

1. **Export.**—The question of which are the best varieties of Plums for export, is one that is not yet solved, and before any decision can be given, a considerable amount of investigational work will need to be done. The following varieties, however, could be recommended for trial:—

**European type** (*Prunus domestica*): Coe's Golden Drop, President, Grand Duke, Black Diamond, Coe's Golden Gage, Pickering, Reine Claude de Bavay (Greengage), Coe's Late Red, Trenowin.

**Interstate:** Those above mentioned, to which may be added Pond's, Angelina Burdett, Late Black Orleans, as well as a few other varieties.

**Japanese type** (*Prunus triflora*): Kelsey, Satsuma, Ballena, October Purple, Santa Rosa, Burbank, also others.

Almost any of the Prunes are suitable for carrying to the interstate fruit markets; at the same time, it would be wise to ship only large fruit, such as Giant, Italian, etc., as fresh fruit.

2. **General Culture and Pollination of Same.**—This subject is dealt with in a series of articles in the Departmental Journal for October, 1925, and following numbers, with the exception of January, 1926, to April, 1926, and will be continued in subsequent numbers. A copy of the schedule showing the blooming times of the various varieties of Plums, and which appeared in the February Journal, is attached. [Will be published next issue.—Editor.]
3. **Silver Blight.**—This disease is unknown in the State, and I would advise you to forward specimens to the Biologist (Mr. C. C. Brittlebank), Department of Agriculture, 605 Flinders Street, Melbourne.
4. **Bearing or Cropping Age.**—About five to six years.
5. **Approximate Date of Picking Each Variety.**—Angelina Burdett, first week in January; Grand Duke, President, Reine Claude de Bavay, Coe's Golden Gage, Black Diamond, second week in January; Pond's, third week in January to first week in February; Pickering, Trenowin, Golden Drop, second to third week in February; Late Black Orleans, Coe's Late Red, second to third week in March;

Santa Rosa, about Christmas time; Burbank, first week in January; Satsuma, October Purple, Ballena, second to third week in January.

6. **Stage of Ripeness at Which to Pick.**—For export, Plums should be harvested six to eight days earlier than for local market.
7. **Methods of Grading and Packing.**—I would advise the writer to write direct to the Department of Agriculture; he will then receive full details, as these cannot be given in a little space.
8. **Temperature to Ensure Best Carrying Results.**—About 33 to 35 deg. Fahr.

## CONTROL OF CODLIN MOTH.

This season has been exceptionally dry and hot, and consequently very favorable to the development of codlin moth, and growers have had a busy time fighting a pest which exacts a heavy toll if adequate precautionary measures have not been taken (states the "Weekly Gazette" issued by the N.S.W. Department of Agriculture). This season's infestation has been heavier than usual in some orchards and in some localities, but the reason has no doubt in a large measure been due to the grower allowing a heavy infestation to start from the carry-over grubs.

If a heavy infestation of moth takes place from the carry-over grubs, the grower is working at a much greater disadvantage than if, as far as possible, all sheltering grubs have been destroyed. It is these carry-over grubs that are responsible for starting the season's infestation, and more particularly in a season like the present, which has very much favored moth development.

The destruction of infected fruit is an important operation, and in seasons like this, when much windy weather has occurred, a great deal of immature infested fruit has been blown off. Unless this fruit is picked up at short intervals and destroyed, the grubs have a chance to escape. Growers are advised to do all in their power to assist in minimising the losses caused by this pest. Only by combined efforts, particularly in closely-settled districts, can satisfactory results be achieved.



(GIBBS BRIGHT & CO.,—See Page xii.)

## New Zealand.

### INSTITUTE OF HORTICULTURE.

#### Organiser Reviews Progress.

#### Sphere for Young Men.

The manner in which the Institute of Horticulture aimed at improving the status of the nurseryman and raising the horticultural profession to a higher grade was dealt with in the annual report of the Dominion organiser, Mr. Geo. Green. Splendid progress had been made during the year, and he was certain that there was a wide sphere of usefulness opening for the Institute.

The publication of the report on horticultural education by the institute's committee marked an epoch in the development of horticulture in New Zealand. The report had been adopted, and the committee had been given instructions to proceed to carry out the recommendations as early as possible. Dr. E. Marsden, assistant director of education, had been appointed as chairman of the committee.

#### Diploma of Horticulture.

It had been suggested that the Institute should be constituted as an examining body, and already 80 applications had been received from horticulturists over 40 years of age, who wished to be granted the diploma of horticulture. The question of plant improvement was one of considerable importance, which was being undertaken by the Institute, working in conjunction with the Nurserymen's Association, the Citrus Growers' Association, and the Agricultural Department. There was much variation in the type of Oranges and Lemons produced in New Zealand, and it was only by careful selection that the types could be standardised and improved.

The horticultural products of the Dominion were now worth £5,000,000 a year, and all progressive horticulturists recognised the need for horticultural training. The outlook for nurserymen during the past ten years had not been particularly bright, but a gradual improvement was being effected. With training and education there would be an increased taste for the aesthetic in horticulture as well as an advancement of the commercial side. Horticulture could now be regarded as a useful sphere for the activities of young men who had to make their way in the world, and the additional educational facilities which were going to be provided would increase the status of Horticulturists generally.

# New South Wales.

Murrumbidgee Irrigation Areas. Commission of Enquiry Appointed  
Citrus Crops Light. Rice Production Seems Encouraging.

(By Our Correspondent.)

Mr. E. J. Polkinghorne, Secretary of the Leeton Fruitgrowers' Association, recently passed through Melbourne. He states that a Commission has been constituted by the Government, consisting of an independent Chairman, appointed by the Government, who is Mr. L. L. Cunningham, ex-Member in the Federal Parliament for Gwydir, New South Wales; Mr. F. H. Brewster, representing the Water Conservation and Irrigation Commission of N.S.W.; Mr. W. M. Evans, representing the dairymen and large area farmers; and E. J. Polkinghorne, representing the horticultural interests of the Murrumbidgee irrigation area.

The Commission has been appointed to enquire into the question of reduction of the debt of the settlers on the area, the re-design of the various farms, the re-valuation where the area has been added to or re-designed, and to determine what is a living area (home maintenance area) in the various industries. The Commission is at present on a visit to the irrigation settlements of South Australia and Victoria, is passing through Melbourne on the way to Adelaide, and will start at Murray Bridge, viewing the settlements from that source right through to Shepparton, Victoria.

Mr. Polkinghorne states next season there will, in all probability, be 1,000 tons of Elberta Peaches on the Murrumbidgee areas, over and above what was distributed through the canneries, fresh fruit market and dried fruit market this past season, owing to the fact that the Leeton Cannery and the proprietary canners of N.S.W. have decided to take no more freestone Peaches for canning. This quantity, of course, is contingent on the growers, not either cutting back or rooting out a number of their trees.

The past season for Apricots and Peaches has been slightly below normal. In Apricots the quality was fairly good, but owing to the rather wet summer, Peaches were not up to the quality of the past year. Pears and Apples in both instances were very light; Currants, fair crop; Sultanas generally speaking very light, except on young vines; table Grapes, slightly below normal.

"At the present time," states Mr.

Polkinghorne, "we are experiencing some difficulty owing to early and frequent rains, which have affected the harvesting of the table Grapes to a very large extent, more particularly in the Purple Cornichons. Notwithstanding the fact that there has been a very heavy demand for Tomatoes this year, the crops have practically been a failure on the irrigation areas.

COVENT GARDEN,  
LONDON

**Ridley, Houlding  
& CO.,**

Large Receivers of Australian  
Fruits.

Solicit Consignments of

**Apples, Pears, &c.,**

Best market prices and prompt  
account sales returned.

Correspondence invited.  
Representative in Victoria

THE  
International Fruit & Mercantile Co.,  
410 Flinders Lane, Melbourne  
MURDOCH BROS., Hobart

**HAMBURG**

(GERMANY)

**J. H. Lutten & Son**

Hamburg (Germany)

**Fruit Brokers & Auctioneers**

Established 1835

**FINEST TABLE APPLES**

**A SPECIALTY**

**Sale Room "Fruchthof"**

Consignment of Apples Solicited

Best market values and  
most favorable conditions

Cash advances made if desired

"The brightest feature there at the present time is the Rice production. About 2,000 acres have been cultivated this year, and are now in the course of being harvested. Crops vary to some extent, production ranging from 60 bushels to 120 bushels per acre. The problem of harvesting is receiving the attention of the settlers, and it now looks as if their methods of

wheatgrowing will to a large extent have to be followed in the production of Rice. This is one of the sources of production which has every appearance of solving our worst lands problems as far as the Murrumbidgee irrigation areas are concerned."

The Citrus crop is stated to be light; 120,000 bushels were despatched from Leeton railway station last season; from Griffith, slightly under the figure just quoted. Only about 5,000 bushels from Leeton went through the N.S.W. Central Citrus Association. The best method of organising this section of the industry would appear to be the formation of a local co-operative company, which, worked successfully, would draw other growers into membership.

## MURRUMBIDGEE IRRIGATION AREAS.

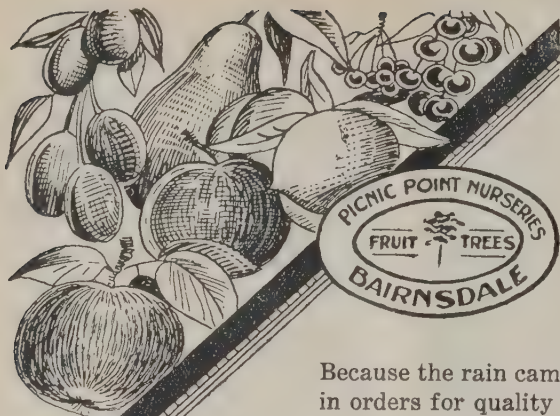
LEETON. April 18, 1926.

Leeton Cannery.—The fruit processing season is now practically closed. The horde of girls and men who annually migrate here have once more vanished. The pack, as regards quantity has not been up to last season, but the absence of rush enabled more careful selection of fruit, and it is anticipated that the quality of the stuff produced will be a record.

Griffith Cannery.—The same old kind of things exist—the foundation of the cannery buildings are still there (neither removed or added to). There is, however, more than ever, a unanimity of opinion by the growers, that an up-to-date cannery is necessary for Griffith. The State Government has had to close the cash box, at all events for the time being on account of the heavy incursions made on it for all sorts of Government schemes, but when finances are less strained, it is felt the Government will give attention to the call of the fruit-grower.

The Area Tribunal.—The Government has now nicely set this function going. Mr. Lawrence Cunningham, the president, has made his introduction to us, and those who have met this gentleman are impressed that he is a desirable man for the position. Mr. Cunningham has had a thoroughly practical experience on the land, and is credited with having an open and well-balanced mind. The members of the tribunal are now taking a roving itinerary into the other States, inspecting irrigation and other settlements before proceeding with the enquiry into settlers individual difficulties. Already a questionnaire has been prepared, conjointly between the settlers' committee and the tribunal members, which em-





# Rain Hastens Up Planting

## Order Your Stock at Once

Because the rain came just in time, there have been big increases in orders for quality Fruit Trees. Growers of experience don't waste time and money on trees of doubtful quality—they send for Good-man Trees—trees that have been grown by experts, and are carefully handled in their digging, grading and yarding, and sent to you protected properly from any injury. Send your orders now to ensure delivery of the varieties you require.

### These Lines Are All Good Money Makers

#### APPLES.

Delicious, Granny Smith, Jonathan, Cleopatra (N.Y.P.), Dunn's, Romes, Londons, Yates, Gravenstein, Winesap (Stay-man's), Rokewood, Statesman, Sturmer, Tasma (Democrat).

#### APRICOTS.

On either Apricot or Plum Stock:—

Blenheim (Shipley), Hemskirke, Mansfield, Moorpark, Newcastle. Oullins' Early, Royal (American), Tilton, and Trevatt.

#### PLUMS.

Angelina Burdett, Golden Drop, Diamond, Damsons, Grand Duke, Green Gage, Jefferson, Magnum Bonum, Pond's and President.

#### PRUNES.

D'Agen (true French), Robe de Sargeant, Splendour, Sugar.

#### JAPANESE PLUMS.

Apple, Ballena, Burbank, Kelsey, Delaware, October Purple, Santa Rosa, Satsuma, Wickson, Wilson.

All leading kinds in Cherries, Peaches, Pears, Nectarines, Quinces, Almonds, Walnuts, Small Fruits, Bushes and Ornamentals.

Our free Catalogue supplies further varieties, and gives much useful information.

Mailed on request.



Quotations gladly supplied.

(W.McF.)

braces 64 questions. A hefty lot surely, but their preparation would indicate that the work has been exhaustive. Organising secretaries have been appointed from both the Yanco and Mirrool ends of the area, another pronouncement made of "now or never" has stirred enthusiasm into the settler.

**Co-ordination.**—At the invitation of the Yanco Fruitgrowers' Association, Mr. Cooke, the orchardist of the Yanco Experiment Farm, delivered a lecture recently on the selection of Cling Peaches for planting. Every known variety of Cling was dealt with, and this entertaining orchardist gave his experience of the tests at the farm. Mr. Cooke has promised to deliver further lectures on hybridising and other phases affecting the fruitgrower. In a discussion following the lecture, it was suggested that there should be an acreage of light loamy ground added to the farm, seeing that at present the experiments were only confined to the heavy soil, of which the farm is composed. It was also considered that a portion of the farm should be set aside as a nursery. The continuance of this co-ordination between the State Experiment Farm and growers is anxiously looked forward to.

#### FRUIT AT CANBERRA.

##### Interesting Experiments.

Recently the State Fruit Expert (Mr. W. J. Allen) inspected the fruit experimental area at Canberra, states the "Sydney Morning Herald." Referring to this visit, he stated that about five acres of various fruits had been under trial for about 11 years. These mainly comprised Apples and Pears, but a few Peaches and Grape vines were included. The trees had attained a good size, and were doing well, but in common with other districts the summer had been dry, and the fruit was somewhat smaller this year than usual. Most of the commercial varieties of Apples were thriving, Granny Smith was, as usual, ably holding its own, while Jonathan and Delicious were among the best. Gravenstein, if worked on suitable stock, was also promising, but on Northern Spy stock results were disappointing.

The whole experiment, Mr. Allen added, was very valuable, as no doubt commercial orchards would be planted, and blocks were being set apart for fruitgrowing purposes. With the growing population of the capital there was bound to be a good market. The territory was not free from cod-lin moth, but with its isolation from other orcharding centres it should be possible to keep the pest thoroughly under control.

#### THE WARRINGAH AND MANLY AGRICULTURAL AND HORTICULTURAL SOCIETY.

Fully 5,000 people attended the fifth annual Show of the above Society, which was held on April 10, in perfect weather, at Brookvale Park, some ten miles from Sydney. There was not a large display of fruit or flowers, as the season was a bad one for growers owing to the prolonged dry weather. The fruit exhibited was excellent. The surrounding districts in French's forest, produces a fine variety of both fruit and flowers.

The poultry display was very good, and quite a large variety of birds was shown.

There is no doubt, the Warringah and Manly Show is improving each year, and next year promises to see it on a still larger scale. The Show was a success in every way, and Mr.

**SYDNEY:**

**Fruit Commission**  
**Merchants Agents**

**S. & M. Greenberg**

**No. 1 Store**  
**Fruit Markets, Sydney**  
Also at Melbourne Markets

Tasmanian Shipping No. 161.  
Victorian Shipping No. 42.

**PROMPT RETURNS**

T. Murray, the Secretary, and his officials, deserve every credit for their untiring efforts in carrying out their duties.

#### A NEW SCIENCE.

Medical science is continually advancing, and an announcement appears in another column of Miss Helen Mackenzie, ex-medical and resident graduate of the original School of Chiropractic, the science which treats the nerves as the root of most disorders. Miss Mackenzie is now practising at 183 Pitt Street, Sydney (Stewart Dawson's Buildings), and possesses many tributes to her skill in treating many diseases.

Miss Mackenzie specialises in dealing with nervous disorders.

Magistrate: "Are you sure he was intoxicated?"  
"Well, sir, his wife says he brought home a manhole cover and tried to play it on the gramophone."

#### TASMANIA.

#### STATE FRUIT ADVISORY BOARD.

A meeting of the State Fruit Advisory Board was held at the Department of Agriculture on April 15.

There were present:—Messrs. Neil Campbell, M.H.A., E. H. Thompson (Jones and Co.), H. Hamilton, J. P. Piggott, M.H.A., B. H. Pearsall, V. J. Skinner, F. Cole, and the secretary, P. H. Thomas. Apologies were received from W. H. Calvert, M.L.C., and A. E. Webb.

**Claims for Damaged Cargoes.**—On the motion of Messrs. Piggott and Skinner, it was decided: "That, failing further proceedings being taken in England, that instructions be given to the Board's solicitor to prepare a case with a view to having it heard in an Australian court."

It was left to the Chairman's discretion as to the institution of proceedings.

**New Delicious Apple.**—Mr. F. Cole moved and Mr. J. Piggott seconded: "That this Board congratulate Mr. F. Walker upon the general quality and type of the Apple submitted and recommend that it be brought to the notice of the Pomological Committee as a distinct improvement upon the ordinary Delicious Apple."—Carried.

**Sydney Committee of Agents.**—On the motion of Messrs. Piggott and Cole, it was resolved: "That the Secretary of the Sydney Committee of Agents be advised that two applications have been received for membership upon the committee, and the Board would request a report and recommendation be supplied as to their admittance.

It was further decided to approve of the dispatch of cables to the Sydney Committee of Agents, subsequent to the despatch of steamers carrying fruit to Sydney, advising the committee of the quantities going forward. It is also considered advisable that this information be published in the Tasmanian press.

**Advertising Fruit in England.**—Mr. Hamilton moved and Mr. Pearsall seconded: "That the National Federation of Fruit Agents be requested to supply a detailed statement as to the total receipts under the advertising levy, and the expenditure made in this respect."—Carried.





## South Australia.

### ORCHARD NOTES FOR SOUTHERN DISTRICTS, MAY.

(By C. H. Beaumont, Orchard  
Instructor and Inspector.)

The work to be done this month will necessarily depend very much on the weather.

Pruning can, of course, go ahead; the stone fruits first and the pip fruits after; vines all the time until completed. The trees in bearing will, generally, need only light pruning. Trees being formed must be pruned to give them strength and shape, but do as little cutting as possible. Split limbs can sometimes be mended up with a few light nails or with a light bolt. Care must be taken to trim up all broken ends so that they will heal, thus preventing disease taking hold.

Planting must go ahead as soon as the soil is in good state, damp and friable. Discontinue if the soil becomes wet. All young trees need a stake for support.

Young Citrus trees must be watered if the rain be delayed. The older trees must be watched for brown rot. Spray with Bordeaux, and cut away the lower limbs; a mulch will help in preventing an attack of brown rot.

Scald all trays used for drying and clean the racks. Do away with all the waste fruit; burn it or bury it deeply. This helps to check fungus pests.

Implements for soil working should be in good order; stopping for repairs is a costly business.

Fruit in cool store needs attention. If you have packed direct from the tree it will pay to grade now and sell the culls. The culls have a value now and there will be less cost for storage.

Ploughing may start as soon as possible to the rows, leaving the centre furrow to carry off surface water. Main drains should be ready to take all flood waters.—South Australian "Journal of Agriculture."

## Western Australia.

Seasonable Orchard Notes.

Pest Control.

### FRUIT-FLY.

#### Winter Trapping Experiments.

(L. J. Newman, F.E.S., Entomologist.)

During the winter months of May to September a further trapping experiment was undertaken to test the relative virtues of several lures. The period of the test was from April 29 to September 1, 1925. The lures used were:—

- (1) Harvey's—A Queensland preparation.
- (2) Green's—a local proprietary preparation.
- (3) Newman's—a local proprietary preparation.
- (4) Pollard, borax and water.

As the comparative tests proceeded it was found that the Harvey lure was almost non-effective, and was, therefore discarded.

The results of the test are shown hereunder in tabulated form:—

| Lure.                       | No. of Traps. | Period.              | Males. | Females. | Total. |
|-----------------------------|---------------|----------------------|--------|----------|--------|
| Green's . . . . .           | 2             | 29-5-25<br>to 1-9-25 | 35     | 855      | 890    |
| Newman's . . . . .          | 2             | "                    | 21     | 594      | 615    |
| Pollard and Water . . . . . | 2             | "                    | 14     | 268      | 282    |
| Total ..                    |               |                      |        |          | 1,787  |

From a perusal of this table it will be noted that Green's lure captured 275 more fruit-flies than Newman's over the period of the test, and 622 more than the pollard mixture.

In fairness to the Newman's prepared bait, it has to be pointed out that it is not sold as a trap lure, but as a foliage bait.

Green's bait has not been officially tested as a foliage bait. Its proving so attractive in traps, however, would indicate that it will no doubt be an effective foliage bait.

In explanation of the comparatively low capture recorded in the pollard home-made lure it has to be remembered that this lure acts as a sex stimulus.

During the months over which the test was applied there is little or no mating of the fruit-flies, the fertile over-wintering females being mostly in evidence. These females are, therefore, not readily attracted to the lure, but fall victims to the traps containing a tempting food.

As a lure during the breeding season of the fly, from September to May, the pollard mixture is effective. For winter trapping, however, Green's lure is the most effective.

Every fly captured in the winter and spring is effectively reducing the early summer attack, and any baits or lures that will accomplish this purpose are strongly advised to be used. In view of these tests, growers can

with confidence use either of the proprietary baits. Growers can, however, just as confidently use the home-made mixtures as published in Bulletin No. 122, but which were not included on this occasion.

One point that needs emphasising in the use of home-made fruit juice bait is the need for applying same within 12 to 16 hours after making. This is necessary owing to the liquid rapidly fermenting if kept longer.

## Latham Dehydrators

"STAND ALONE"

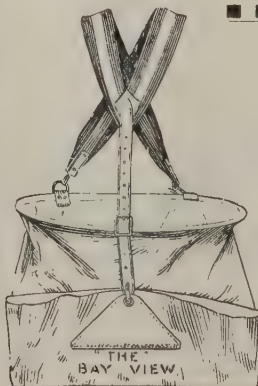
The "Rolls Royce" of the Artificial Drying World.

Particulars, Prices, and list of present users on application

## D. J. LATHAM

157 Queen Street,

Melbourne, Australia



## "Bay View" Fruit Picking Bag

CAN BE USED FOR ANY CLASS OF FRUIT

Allows use of Both Hands in Picking.

No Bruising of Fruit.

Weight Carried on Shoulders instead of Back of Neck.

MR. J. LANG, President of the Australian Conference of Fruitgrowers, writes:—"After two season's use, I am well pleased with Bags; fruit receives the minimum of handling, and is less liable to damage. They are also a great time saver."

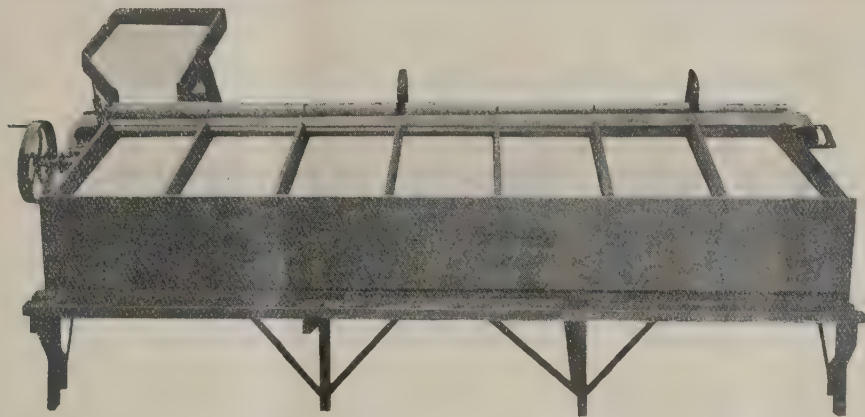
Price 12/6 each

Postage extra, one bag, 1/-; two, 1/9

F. R. MELLOR, 440 Elizabeth St., MELB.

# The "Lightning" Fruit Grader Co.

ANTICIPATES YOUR NEEDS AND OFFERS YOU MANY SUCCESSFUL UP-TO-DATE MODELS



MODEL 11.—The above is one of the New Models included in Catalogue No. 4. Length 11ft., breadth 4ft. 6in., not including feed hopper. Each spring floor bin is 18in. x 36in., and holds up to 3 cases of fruit.

NOTE NEW ADDRESS:

## "Lightning" Fruit Grader Co.

5 Hoddle Street (2 doors from Victoria Parade), Collingwood, Melbourne.

Cable & Telegraphic Address:  
"Lightning," Melbourne

### Our New Catalog NO. 4

just issued, contains several models which you have not hitherto seen.

### You will be interested

Write for a copy.

All "Lightning" Models are equally suitable for all Citrus fruits, as well as Apples, Pears, Peaches, etc.

### HORTICULTURAL NOTES.

(Geo. W. Wickens, Officer in Charge  
Fruit Industry.)

#### SEASONAL WORK FOR MAY.

Pruning stone fruit trees commences before the end of this month, but varieties of Peach and Nectarine trees, which have a habit of shedding their buds, should not be pruned until the buds burst in early spring.

The first spraying to control San José Scale should be applied before the end of the month; to be followed later in the season, preferably towards the end of August, with a second application.

In the early days of the fruit industry in Western Australia, when San José first appeared in the orchards,

the pest was thought so difficult to control, that many trees were rooted out and burned to keep the pest in check; but with more experience it was proved that, provided spraying was thoroughly carried out while the trees were dormant, the disease could be reduced to such an extent as to make it a hard matter to discover any live specimens during the following summer. Unfortunately "familiarity breeds contempt," and there are some growers who are inclined to treat what is undoubtedly a most serious pest with insufficient consideration. If left to its own devices, San José Scale will in a very few years partially kill such trees as Apples, Pears, Peaches, and Plums; I do not know any orchardist who allows this to happen, but what is occurring is laxity in spraying; either the trees are not being sprayed often enough, or not properly coated with the mixture, or the material used is of insufficient strength.

In season 1925, several consignments of Apples were refused export permits on account of infestation by San José Scale, and growers only have themselves to blame for not carrying out proper control methods in the previous winter.

To keep San José Scale in check it

is necessary to spray twice while the trees are dormant, the first to be applied as early as possible after the leaves have fallen and the second towards the end of winter. As August is often a wet month, special care should be exercised in making the May application a very thorough one.

Use commercial lime sulphur at a strength of one gallon in ten gallons of water, or if the pest is very bad the strength can be increased to one in eight. Lime sulphur can be used for both sprayings, or a reliable brand of spraying oil may be substituted for one of these.

If the weather remains fine, continue baiting for fruit-fly, and if not fine enough for efficient baiting, commence using fruit-fly traps.

Where Orange and Lemon trees in orchards showing infection last season were not treated for Brown Rot during April, they should be sprayed as early as possible in May.

He rushed into the police station, breathless with hurry and excitement.

"They say you've caught the man who broke into my house the night before last," he gasped.

"Yes," answered the sergeant. "Do you want to see him?"

"Rather," said the other. "I want him to tell me how he managed to get into the house without waking my wife. I've been trying to do that for the last ten years."

### IS IT A STOMACH COUGH?

If your cough is a chest cough, this does not interest you. But if it is due to stomach disorder, and is accompanied by a furred tongue, phlegm in the throat, and a general feeling of "goneness," it is time you took a dose of A.M.S. This herbal extract is a wonder worker, and a positive cure for indigestion and Liver troubles. A few drops after every meal is keeping thousands in perfect health, and buoyant spirits. A.M.S. costs 3/- the bottle, by post 3/6, and can be procured from all chemists or country stores, or direct from T. A. Dickson, Chemist, Geelong, Victoria.



The Slogan of the Primary Producer  
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This does not mean increased acreage  
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acre.

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# New South Wales Royal Agricultural Society's EASTER SHOW

Splendid Display of Primary Produce and Industrial Achievement.

A City Within a City. A Spectacle of Progress, Arena,  
Exhibition, Cavalcade and Olympiad.

(By J. H. Coghill.)

**A**NOTHER TRIUMPH was secured by the Royal Agricultural Society of New South Wales last month, when their Annual Show, which was opened at Moore Park, Sydney, on March 29, established a record, both as regards attendances and the variety and number of exhibits.

Some weeks before the opening of the Show, pessimism prevailed to a certain extent owing to the prospects of the weather being of an ominous character. However, all went well some days before the day of opening, when hearts rejoiced at the bountiful rains which fell throughout our State, and created record attendances each day of the Show.

The neighboring States and the Dominion of New Zealand also, forwarded many interesting exhibits, and the scene on the opening day was a most attractive one. "Bigger, better, and brighter than ever," sums up the opinion of visitors to the Show of 1926, which will take a lot of beating, although the yearly improvement in the character of the Show makes that prophesy a rather risky one.

Perhaps the outstanding impression after visiting the showgrounds is that the architect and contractor have encroached considerably upon the all too limited space, and it becomes a matter of serious cogitation as to how the Society is going to cater in the future for the constantly increasing number of exhibits and attendances, which mark each succeeding Show.

The march of invention is apparent in the great number of machines constructed for the cheapening of well-nigh every kind of production, and ensilage and silo tubs show how the science of agriculture in preventing the farmer being too much at the mercy of the seasons has spread throughout the farming community. Those aids to agriculture would not be there unless the demand for them existed, from which we may conclude that farmers are at last awake to the necessity of taking every possible step to guard against the evil that follow from drought. It was a fine Show in every sense of the term, and that the public recognised the efforts of the Council to provide them with a carnival worthy of a visit was proved by the record attendances.

The Sydney Royal Society's Show is so attractive every year that it draws visitors and exhibitors from all parts of Australasia. The grounds are well laid off, even to street nomenclature. The walks, pens, yards, side-shows, kiosks, and pavilions are many and detached. The ring is grand, and the amphitheatre of sight is really magnificent to behold.

## The Weather and the Attendance

The weather at Easter time was ideal in every sense after the beautiful rains which drenched the State some days before the opening day of the Show. The crowds of happy, smiling and well-dressed people from town and country arrived in their thousands, and they soon thronged

gates, walks, drives, machinery alleys, sideshow avenues, buildings, and long lines of stock sheds. The forenoons of the several days' Show were chiefly devoted to see and inspect the exhibits, "all of beauty, all of use, that one fair planet could produce." But after the mid-days, the outdoor sights were "the all in all" of the huge gathering, typical of every State—embracing all classes and ages—in fact, youth and age once more met in Moore Park to their hearts' delight.

The Royal Show may be divided into seven great sections—the show of stock, agriculture, the parade, the ring, the sales, the buildings, and the machinery.

## The Show Proper.

Once within the gates, and the presentation of a grand moving sight was instantaneous. The comprehensive glance was full of whirl, excitement and pleasure bent.

Where shall we start first? It is useless to describe in this "Fruit World," the Show by sections, so we will take it as it comes.

We follow the gay and animated crowd through the long rows and crescents of working and ponderous machinery—working and silent—agricultural implements, reapers, binders, and ploughs; the novelty stands and pushing companies' wares; the public booths and dining rooms; the irrigation plants, the hundred and one items of steam, wheel, and engineering; the haunts where earth's inventions are stored, and

"Where science, art, and labor have outpoured

The myriad horns of plenty at our feet."

A feast of Australasian east and west, to the far tropical north, to the prosperous harvesting south—even to the hundred isles of Oceanic—Polynesia.

## The Glories of the Ring.

And what a ring! What parades of peace, wealth and prosperity—present and future! What a mighty panorama of people—men, women and children—of the State and Sydney. What a huge admiring circle of faces, as if they sat witnessing scenes in the Roman arena, or in the Olympiad of "Hellas, deemed of heavenly birth"! What scenes of cavalcade, Australian spectacle exhibition, colonial and Imperial expansion. The Show differs from the shows of London, York, Devon, Glasgow, Edinburgh, Dublin, or Belfast.

The grand parade of blood stock such as Suffolks and Clydesdales, prize bulls and cows, with strains of the Hereford, Durham, Ayrshire, Jersey, and Holsteins, which we know grace the shows of Motherland. But we Australians beat them in daring riding, high jumping, water leaping, and dashing driving. The ring opens with all that is good, rich and rare in horses, breeds, ponies and vehicles—in the slow stride of the heavy-beaved Durham ox, or the curly, brindled Hereford, with the brown Devon, the piebald Ayrshire, or the beautiful prize-taking dairy cattle. Added to this are the trotting horse; sharp run of sulky, buggy, and dogcart, down to the baker and



# Hart-Parr Co.

## Founders of the Tractor Industry.

**T**HE firm of Gibbs, Bright and Co., has always enjoyed a high reputation for the many first-class agencies conducted by them. Their name is a household word amongst the primary producers of New South Wales, through the medium of two of their most important agencies, viz., Hart-Parr Tractors and Sulphide Fertilisers.

At the recent Sydney Show Gibbs, Bright and Co.'s exhibit of Hart-Parr Tractors was the most comprehensive and interesting of any tractor display on the ground, and attracted interested crowds of both country and city people.

The popularity of the Hart-Parr Tractor in the country districts has been established beyond doubt, and it is destined to play a very great part in the development of Agriculture throughout Australia.

Agriculture is the basis of all industry. It is the one industry on dustry. It is the one industry on which all others depend, and as long as the human race needs food, just so long will agriculture persist, and the farmer need improved machinery to make his crops more certain, his yields larger, his production costs lower, his physical labor less, and his profits sure.

In the early days man produced his own food by his own labor. Later he subjugated other men and forced them to labor for him as slaves. From ox-power, in the past generation or so, man advanced to the general use of horse-power.

The present intensive cultivation of farms to feed the vast population who live in cities, and furnish food for export, is causing horse-power to be largely supplanted by mechanical power in the shape of tractors. With the demand from our cities for more food, comes the demand from the farmer for more and better machinery, with which to increase his food production.

As a result, a short generation has seen the crude methods of centuries swept away. Seeding machines replace the hand sower;

mowing machines and reapers replace the sickle and scythe; threshing machines and combines replace the threshing flail; automobiles and trucks are replacing the horse for transportation; stationary motors and windmills are replacing the hand pump; and the tractor is replacing all other kinds of motive power for hauling and belt power on the farm. Old hand methods of flesh and blood can no longer compete on the farm with modern methods, which use mechanical power.

To-day, as never before, every farmer is in competition with every other farmer, not only at home, but in foreign countries the world

has never before been equalled. In Canada, Australia, the United States, the Argentine, in Europe and in South Africa, wheat farmers are to-day discarding animal power for the best tractor-power money can buy.

It is the world market which fixes the price of wheat or any other farm product, which is universally consumed. Regardless of artificial market conditions, year after year, the farmer who produces his crops most cheaply, with improved machinery, will make the biggest profit. Therefore, the farmer who tries to compete against this improved tractor-operated farm machinery, with obsolete animal power, is doomed to failure. Competition will decide in favor of improved methods every time.

Farming has frequently been termed "a gamble," certainly the farmer has always been obliged to take big risks. He is forced to stake his time, money and experience in one effort to win or lose on his season's crops in a fight with nature. And within the very few weeks or months allowed by nature, the farmer must plough his ground, prepare the seed-bed, sow or plant his crops, cultivate them to maturity, harvest and market them. His time for operation is limited by nature to a few days.

His crops may also be retarded, and sometimes destroyed by cold weather, too much or too little rain, dry or wet springs, hot weather, and late or early frosts. The farmer must combat all these conditions, and by quick work in the few days allowed him, handle his crop as best he can.

And after seeing demonstrations of the Hart-Parr Farm Tractor at the recent Show, there should be a bigger demand for this class of power, both for the farmer and orchardist. The Hart-Parr Tractor is under the direct control of Mr. McCallum, and who also supervises the fertiliser department for Messrs. Gibbs, Bright and Company, whose offices are at Pitt Street, Sydney.

### IMPROVEMENT IS THE ORDER OF THE DAY.

Modern methods of soil tillage demand efficiency with economy.

The tractor has proved the best friend of the man on the land. It works consistently with tireless energy, and when not in use is not eating its head off.

And the machine which has won universal appreciation is the Hart-Parr Tractor. Why? There's a reason!

over. Wheat raised in the United States or in Canada, is in direct competition with wheat raised in Australia, the Argentine, or Europe.

Progressive farmers and orchardists in every part of the world realise this fact, and are equipping their farms with the most

improved power machinery to produce their crops at the lowest possible cost per unit, so they can still sell on the world's market at a profit.

For instance, the volume of tractors and tractor-operated implements that are moving on to the wheat farms of the world to-day,

butchers' cart, the ponderous furniture van, the brewery, warehouse, and the Circular Quay motor lorries—"Australians all." The long tiers of people silently admire the strange thoughts, or cheer the wearers of blue ribbons, or the clever audacity of horse jump and water leap. The roar, cheer, and echo of approbation sounds upon the ear. It is life—personal, district, and national life. Truly the ring at Moore Park was the gay scene of cavalcade, parade, Olympiad, and exhibition proper—with man present, aye, and God near!

#### The General Show in Agriculture and Horticulture.

Time and space will not allow us to write up all that we might do descriptive of the great Show this year. There is much to write about, especially with regard

this truth be told broadcast all over the land, with the hope that country production, in every shape and form, will blossom like the Rose, and that the voice of plenty, prosperity, good times and good government will be permanently heard, and re-echoed, throughout the Commonwealth—this Australasia!

#### Opening Ceremony.

The official opening ceremony was performed by His Excellency the Governor-General, Lord Stonehaven, who was accompanied by Lady Stonehaven. Those present on the dais included (besides Lord and Lady Stonehaven), the State Governor, Sir Dudley de Chair, Lady de Chair, the Governor of Western Australia, Sir William Campion, and Lady Campion, the Prime Minister (Mr. Bruce), and Mrs. Bruce, and Sir Samuel and Lady Hordern.



A Typical district exhibit at the Sydney Royal Show.

to the district exhibits of the Government Agricultural Department. They all proved what country production is, but we have yet to learn what the farmers mean by not putting in similar crops with the same successful culture as those State farms of Wagga, Glen Innes, Bathurst, Hawkesbury, and other places.

If they did learn the object lessons of those experimental farm exhibits, the great bulk of farmers would have crowded the exhibit benches with their varied produce, as large and well-grown as those of the State farms.

All wealth comes from the soil, and the cities and commerce pays by the profits of country production. Let

The addresses were clearly audible to the people on the large stand, through the use of amplifiers. From a platform in front of the stand, His Excellency Lord Stonehaven, presented the cups won by the successful exhibitors.

The President's address, presented to Lord Stonehaven by Sir Samuel Hordern, said: "On behalf of the members of the Council of the Royal Agricultural Society of New South Wales, I desire to tender you a very hearty welcome amongst us here to-day, and assure you that we are deeply sensible of the honor you have conferred upon the Society in consenting to perform the opening



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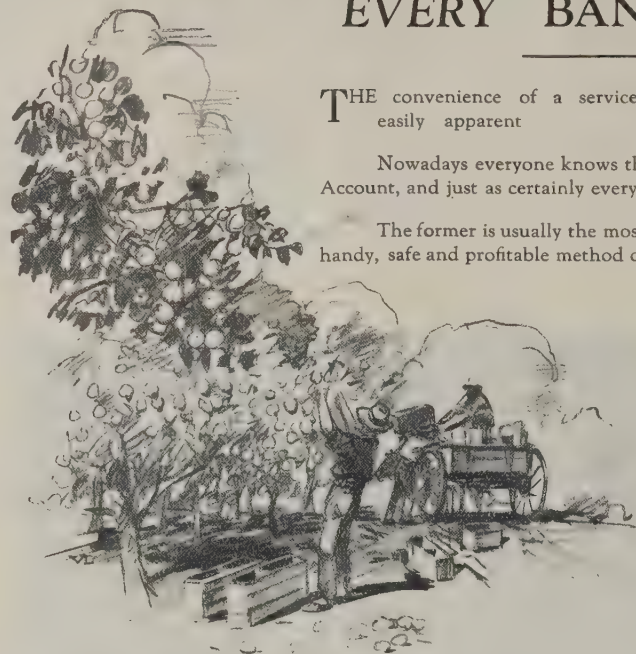
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ceremony at the first Royal Show in Sydney after your arrival in Australia. We note with gratification the warm interest your Excellency has evinced in the great primary industries of this vast continent, and in the settlement and development of its practically illimitable empty spaces. This enthusiasm warrants us in hoping that you will appreciate to the full the objects and aims of the Society, which above everything else, stands for the welfare and progress of the man on the land. I am pleased to say that the exhibition your Excellency will open to-day is the finest that has been promoted by the Society. The display of livestock will bear favorable comparison with that of any show in any part of the world. The animals shown come from every State in the Commonwealth, as well as from the Dominion of New Zealand, and are thoroughly representative of the breeding studs of Australasia. The products of the soil are here displayed in great profusion. In the agricultural section are fine large collections in the district exhibits competition. Each of these exhibits is contributed to by many districts, the organisation of which is carried out by the Country Agricultural Societies. People who have attended all the leading shows in Great Britain, America and South Africa, are unanimous in declaiming this part of our exhibition as without a serious rival competitor. Whether this is an extravagant statement or not, your Excellency will be able to give a dispassionate and unprejudiced opinion. The machinery and manufactures cover some eighteen acres of space, and implements of all varieties of service to pastoralists, farmers and orchardists are here displayed.

"The Commonwealth is enjoying a fair average season, and the exhibition held under normal conditions is, we believe a true reflex of the production of the country in such a year. In conclusion, I desire to assure your Excellency of the loyalty and devotion of the people of this great young Commonwealth to the Throne and person of his Most Gracious Majesty, King George V., and to express the hope that under Divine providence he may long be spared to reign over us."

#### His Excellency's Reply.

His Excellency, in reply, said that he was pleased to acknowledge and express thanks for the assurance of loyalty and devotion to His Majesty the King which had been given. As they were no doubt aware, His Majesty was a keen supporter and patron of agricultural shows, at which he had won considerable success as an exhibitor. He was indeed grateful for the warm welcome which had been extended to him personally on the first occasion on which he had visited the Sydney Show. He hoped to visit the Shows annually during his term in Australia. He was glad to learn that the Show was up to the standard set by its predecessors. He congratulated the farmers of New South Wales on the recent bounteous rain and expressed the hope that it would relieve anxiety and contribute towards a prosperous season, in which the whole country would share.

#### AMONGST THE EXHIBITS.

Commonwealth District Competition.

Magnificent Display of Primary Products.  
In the Agricultural Hall.

The display of primary products at the recent Royal Easter Show was a wonderful effort. There were five districts in competition—the North-Coast and Tableland, Central-Coast and Tablelands, South-Coast and Table-

# "IBIS" CANNED FRUITS

Peaches, Apricots  
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lands, Western District, and West Moreton and Downs, Queensland, and in that order the prizes were awarded.

These district exhibits could not possibly be excelled in any part of the world, and has become one of the classic events of the Royal Show. They represent the basic activities of the army of producers from the State. Then there was Queensland, the adjoining State, which always took an interest in the Royal Show, and produced one of the finest exhibits ever staged. These five district exhibits occupied nearly the whole of the Agricultural Hall.

#### Fruit Exhibits.

Considering the drought of the past season, the display of Apples in the various classes was quite up to the standard, and free from blemish.

The centre of attraction was, no doubt, the district collection of Apples in pyramid form. The many exhibits created an animated appearance, with the thousands of visitors who thronged the Agricultural Hall.

#### A Model Farm.

Fronting the Agricultural Hall was a model farm, laid out on such lines as to represent a 19 acre holding on

the irrigation area of Yanco. The exhibit suggests country homesteads amidst rural surroundings. A rabbit-proof fence encloses a border avenue of Silky Oaks, with avenues of Sugar Gums, and patches of Wheat, Millet, Rye, and Lucerne; besides orchards and vineyard, with breakwinds of Apricot trees and Carob Bean, which is a good succulent stock fodder. The exhibit was inspected by thousands, and reflected great credit to Mr. W. J. Allen, the State Fruit Expert, who had full control of the model farm. The shrubs and plants were supplied by the Sydney Botanic Gardens.

#### Apple and Pear Pyramids.

The Agricultural Hall was the centre of attraction in regard to the very fine display of Apples and Pears in pyramid form. There were six entries in these classes, and the staging of the exhibits reflects the greatest credit to those growers who so patiently marked time in arranging the pyramids. Considering the long dry summer, the fruit, on the whole, was very good.

The Tallong Fruitgrowers' Association obtained first prize—£45, and a bronze medal. Bathurst Fruitgrowers' Association, took second prize—£30. Third prize went

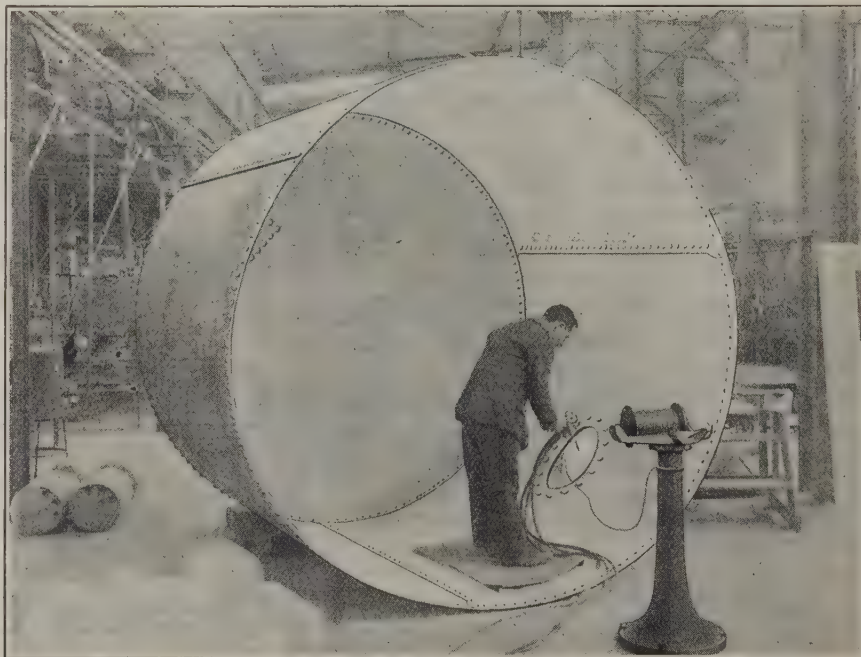
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to the Hartley District Fruitgrowers' Association—£25. Mr. Allen, the State Fruit Expert, said the fruit exhibits were particularly attractive.

The judging of the fruit was in the very capable hands of Messrs. W. J. Allen and W. H. Broadfoot, of the Agricultural Department. Mr. E. K. Wolstenholme judged the Apples and Pears; and Messrs. J. M. Arthur, orchardist at the Hawkesbury Agricultural College, and F. Chilton, one of Sydney's leading fruit distributors, and an expert in all classes of fruit, the other varieties of fruits.

#### State Exhibits.

The exhibits displayed by the State in the Agricultural Hall were of a very fine and attractive class. There were experts in charge daily to offer any answers to questions put by visitors. There was almost every conceivable product from the soil. There was also an information bureau, which was much availed of by the public.

The Water Conservation and Irrigation Commissioners displayed an exhibit showing what is being carried out on the Murrumbidgee irrigation area. There were many kinds of fruits on view in large jars, and also the various qualities of canned fruits, and dried fruits put up in cartons. An exhibit of wool, bacon, Wheat, Oats, and various root crops. The whole display was of a most interesting character.

The West Batlow branch of the Agricultural Bureau of New South Wales had a very fine display of Apples in the pyramid competition, and in face of many other keen exhibitors, was awarded second prize. Batlow is known as one of the finest fruitgrowing centres in our State. The Apples exhibited comprised no less than 20 varieties, and were shown just as they were picked from the trees, and no touching up.

The Leeton district had a good display of Apples, which were taken from three acres grown in Mr. Gersbach's orchard. There were 14 varieties in this section.

The Goulburn district and Chamber of Commerce staged 20 varieties of Apples. It was a splendid district exhibit, the fruit coming from Towrang, Parksbourne and Goulburn. This is the first occasion on which the Goulburn district has exhibited on the export standard grade. In the pyramid exhibit the best varieties shown were Granny Smith, Rome Beauty, Delicious, London Pippin, Cleopatra and Tasma.

The open classes of Apples were well represented, and up to the standard of past seasons.

#### Dried Fruits.

Commenting upon the dried fruits displayed in the district exhibits, Mr. J. M. Arthur, fruit expert at the Hawkesbury College, and Mr. F. Chilton, a leading fruit merchant, of Sydney, thought the dried fruits could be considerably improved upon. The crystallised fruit from the South-Coast Tablelands' exhibit, were an exceptionally fine lot, and both these gentlemen had never seen anything in or out of a show that could excel them.

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**Poultry Exhibits.**

There were nearly 2,000 exhibits in this year's Show, and was the most representative of birds made for many years past. There were standard breeds of every known kind. The utility section increases yearly, both in number and quality, and many birds in this section equal, if not excel, quality and type in the standard section. The breeding teams were a revelation in quality, being well mated and balanced.

**Poultry Farm Exhibit.**

Mr. F. T. Wimble, of Sydney, won first prize, a silver cup, for best birds of each sex, notable for type, past performance, or general excellence, eggs produced in exhibitor's yard, green feed grown, and ration used. This was a very fine exhibit.

**The Show Ends.**

The Royal Agricultural Society closed its gates for 1926 with the most remarkable attendances ever achieved

by any other Show throughout Australasia. All records were beaten. Over 50,000 more people attended this year as compared with 1925. The following is a table showing comparative figures:—

|                        | 1925.             | 1926.          |
|------------------------|-------------------|----------------|
| <b>First Week.</b>     |                   |                |
| Monday .. . . .        | 8,750 ..          | 9,500          |
| Tuesday .. . . .       | 16,750 ..         | 16,840         |
| Wednesday .. . . .     | 48,000 ..         | 44,150         |
| Thursday .. . . .      | 50,000 ..         | 53,680         |
| Friday .. . . .        | 127,300 ..        | 153,150        |
| Saturday .. . . .      | 120,000 ..        | 144,250        |
| <b>Second Week.</b>    |                   |                |
| Monday .. . . .        | 148,000 ..        | 151,800        |
| Tuesday .. . . .       | 80,400 ..         | 74,900         |
| Wednesday .. . . .     | 26,000 ..         | 27,670         |
| <b>Totals .. . . .</b> | <b>625,200 ..</b> | <b>675,940</b> |

**SPRAYING, AND SOIL TREATMENT.**

Messrs. Lincoln & Blunt's Specialties.

This firm exhibited at the Show two most valuable sprays for the orchardist, farmer, vigneron and gardener—Qua-Sul, which is a soluble carbon spray, and Vitamite, a living vitaliser.

Qua-Sul is a very potent sulphur-carbon solution, which is a most effective fungicide, and has a wonderfully beneficial effect on plant life of all kinds. It is applied to both trees and soil. When sprayed on trees it attacks the disease by direct contact.

Vitamite has proven of great value to all the varied crops on which it was used. The results were equally effective, whether the crops were fruit, vegetables, or farm crops, showing the range of usefulness of this material. Vitamite forwarded the growth of tomatoes fully ten days, and the maturity of the fruit was much earlier. On Grapes, Apples, Pears, Quinces, Plums and Currants, Vitamite improved the yield, growth and color of the fruit.

The exhibit caused considerable interest.

**THE SANITARIUM HEALTH FOOD COMPANY.**

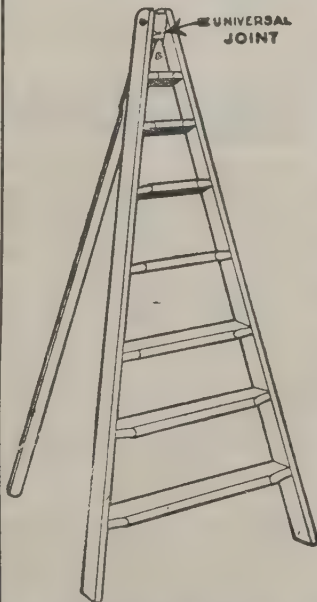
In the Hall of Industries, this company had displayed a splendid collection of vegetation food preparations, such as Granose, Granola, Granut, Gluten, Sanbran, Marmite, nut meal, nut cheese, and many other preparations for those who desire a careful diet. The company has been established throughout Australasia for many years, and their products are recognised by the general public as a very healthy diet.

**SHOWGROUND BANKING—A NOVEL, PRACTICAL AND CONVENIENT SERVICE.**

The decision of the Commonwealth Bank of Australia, four years ago, to establish a fully operative branch in the heart of the Royal Sydney Show, was hailed with delight by the Show official, who had for years been harassed by exhibitors, visitors and others seeking change and safe custody of cash overnight. For nine days and five nights the Sydney

Showground is an extremely active business centre, and the turnover of cash is enormous. Exhibitors who had hitherto been obliged to send takings into the city banks before three, and make what arrangements they could for the safe custody of the balance of the day's takings, welcomed the Commonwealth Bank's innovation, and the general public, too, soon realised the convenience afforded.

Each successive year the branch has doubled its turnover of the previous year, and now is actually hand-

**The Mote Patent Extension Ladder Co.**

**Expert Manufacturers of—**  
**LADDERS** — Extension and Ordinary.  
**STEPS**—Extension and Ordinary.  
**TRESTLES**—Extension and Ordinary.  
**Adjustable Platform—TOWER LADDERS.**  
**TRACK LADDERS** — Shop Use.  
**Patent Extension — SCAFFOLD PLANKS.**  
**ORCHARD STEPS, &c.**



City Office and Showrooms:

**No. 1, BLIGH ST.  
 SYDNEY**

'Phone: B 1667.

**Works—WESTON ROAD, ROZELLE, N.S.W.**

'Phone: W 1301.



ling more money than the Show officials do.

Visitors from all over Australia transfer their funds direct to the branch and thereafter do not have to leave the grounds for banking purposes at all, for the Commonwealth Bank's branch is open up to 9 o'clock at night. After the Show is over, funds can be transferred to any point in Australia. This splendid service has been extended to every capital city, showground branches having last year opened in Melbourne, Adelaide and Perth, while Brisbane was established some years ago.

The Commonwealth Bank has always endeavored to place its facilities directly at the service of the people, and the showground branches are definite evidence of its efficiency.

The Vacuum Oil Company Ltd., had a very good display of their oils at the Show. Their oils are suitable for all kinds of lubrication, even the home sewing machine, or the machinery of a large power house. They can supply anything suitable for oils. A big trade is done in supplying fruitgrowers for spraying, power, and lubricating machinery.

**"Lightning" Fruit Grader Company.**—An interesting exhibit at the Sydney Show was shown by this company, whose machines are well established among fruitgrowers throughout Australasia. Messrs. John Jenkins and Sons, Fruit Exchange, Sydney, are the New South Wales agents. The Lightning grader machines did good work at the Show, and created considerable attention.

### Personal.

A visitor to Sydney during the late Easter Royal Show, was Mr. A. E. Webb, a director of the firm of Messrs. Bender and Co., of Launceston, Tasmania, fruit and general commission agents. Mr. Webb's firm are also agents for Messrs. Cooper and Nephews' (Australia) Ltd., spraying materials.

Mr. A. J. Arnot, of Batlow, took first prize at the Show for Winter Cole Pears. The exhibit of Mr. Arnot's Pears was much admired, and speaks well for the Batlow district as a fruit-producing centre.

Major Dakin, Australian representative for Messrs. Geo. Monro Ltd., fruit salesmen, of London, presented a special prize of three guineas, for the best bushel case of Apples for export, which was judged for variety of fruit, quality, packing, grading and case.

### GIBBS, BRIGHT & CO.

**V**ISITORS to Gibbs, Bright and Co.'s fine exhibit of the Hart-Parr Power Tractors, could not but feel impressed with the excellent display of the Hart-Parr Tractor's lifting power.

By an arrangement of cables running round the wheels and fastened to a wooden framework, the tractor lifts itself 15 feet in the air, and the operator jumps it quickly up and down, and holds it in mid-air by the brakes, when it is again lowered gently to the ground. There was also featured a new patent "power take-off" device, and, by means of a long connecting rod, the tractor drives the mechanism of the header to which it is attached, and a safety stop to check the works.

Previously headers were driven off their own wheels, and in heavy crops, skidding sometimes meant damage to the machinery. The connecting mechanism for the power take-off was supplied by Messrs. George E. Fortescue and Sons Ltd., whose fine exhibit of windmills, rabbit-poison carts, etc., was directly opposite to Messrs. Gibbs, Bright and Co.'s interesting Hart-Parr Tractors. The exhibit was witnessed by large audiences daily during the Show.

Mr. J. C. McCallum, the firm's manager for the Hart-Parr Tractor and sulphide fertilisers, together with his busy staff of workers, carried out every detail to visitors without the slightest hitch.

The Hart-Parr Power Tractor should become a big asset to the man on the land.

### THE MOTE PATENT EXTENSION LADDER CO.

The above company is well known in the manufacture of patent extension ladders, combination trestle and extension ladders, adjustable tower ladders and extension steps, and all descriptions of ladders, steps, trestles, orchard steps and builders' requisites. At the recent Easter show in Sydney, the firm of Anthony Hordern Limited displayed a very fine collection of these ladders in their large and picturesque pavilion.

The Mote extension patent ladders are light in weight, exceptionally strong, easy to raise and lower, convenient for transport, and can be easily adjusted to any height required. The Mote ladders are extensively used throughout Australia, and the increasing support the company have enjoyed for many years is indicative of their durability, efficiency and utility.

### THE COMMONWEALTH BANK OF AUSTRALIA.

The subject of our illustration is that of Mr. T. F. Sullivan, who has been associated with the Commonwealth Bank of Australia, at Martin Place, Sydney, for the past six years. During that period, Mr. Sullivan has controlled all publicity matters in connection with Commonwealth Loans up to June last. Besides having conducted such publicity campaigns, he is also editor of "Bank Notes," a well illustrated and useful magazine which has a large circulation in the interests of financial investors and others.

Mr. Sullivan, although a native of Ararat, Victoria, is a permanent resident of sunny New South Wales,



Mr. T. F. Sullivan, Editor "Bank Notes."

and looks upon Sydney as the "hub of the universe."

Much of the success achieved by the introduction of the publication, "Bank Notes," is due to Mr. Sullivan's knowledge of banking publicity matters. He also possesses a keen perception in handling the bank's advertising appropriations in successfully placing publicity space with suitable publications. Mr. Sullivan is a first-class amateur photographer, and many of his prints have appeared from time to time in magazines. He also has a very capable staff under his direction in carrying out publicity matters in connection with the Commonwealth Bank.

**PREVENTION OF CORROSION.****The Schoop Metal Spray Process.**

An eminent metallurgist once estimated that corrosion costs the world something like £600,000,000 per annum, much of which is spent in replacing and treating iron and steel articles which were rusting away. The Metal Spray Process is one of the methods used to lessen this great burden on industry, as by its means iron and steel, and indeed, most materials, can be successfully coated with non-ferrous metals not so readily attacked by the atmospheric, water, chemical and other corroding agencies. The procedure is as follows:—The article to be coated is firstly sandblasted to remove all dirt, rust, or scale, and leave a perfectly clean surface on to which the covering metal is sprayed by means of a special apparatus known as the Schoop Pistol.

This latter consists of a small compressed-air driven turbine, operating a wire-straightening and feeding device which causes the metal being sprayed to pass in wire form through an oxy-acetylene flame in a nozzle incorporated in the pistol.

The wire is here melted and atomised by a surrounding jet of compressed air at 50 lbs. per square inch

pressure; the pistol is pointed at the surface, being coated, and the fine particles of molten metal adhere by their hammering action on the sand-blasted surface.

There is no distortion of the treated article and even silk can be coated with molten metal without catching fire or burning. At the company's works, at Stanmore, very many large tanks for storing fruit juices, milk products, wine, etc., have been coated with tin and aluminium, and windmill members, pump rods, and tanks are continually being zinc-coated to prevent rusting. The company does a very large business in spraying all classes of steelwork, from small sections used in steel window manufacture to large structural steel members of considerable length, such as is used for masts for electric transmission lines. Zinc, lead, tin, aluminium, brass, bronze, copper and monel metal can all be sprayed onto steel, cast iron and other articles.

**Australian Fertilisers Proprietary Ltd.**

This company, which was for many years known as Geo. Shirley Ltd., has enjoyed an excellent reputation during the 32 years of business trading throughout Australia

with primary producers, and it is most gratifying to find that the confidence which Shirley's enjoyed, is still as much in evidence as ever under the title of Australian Fertilisers.

In our last pre-Show issue, we outlined a short sketch of the company, and here we shall deal with phosphoric acid, which is the foundation of modern plant-feeding. Anyone familiar with the remarkable virtues of phosphoric acid in promoting the successful growth of crops under Australian conditions, could fill pages in dealing with the many and varied ways in which this most important plant food assists to produce "money from the soil."

But for all practical purposes, a very brief review of the subject will suffice to make clear the outstanding fact that, without an ample supply of phosphoric acid in available form, good crops cannot be produced.

Our soils being notably deficient in phosphoric acid, farmers and other producers should pause before attempting to grow any crop without making sure that, if not present in the soil in available form, a sufficient quantity for the crop's needs is applied in the form of superphosphate or other fertiliser.

Phosphoric acid in an available form performs the two most impor-

## LONDON AND NORTH-EASTERN RAILWAY THE PORT OF HULL

The Port of Hull is directly served by the London and North-Eastern Railway and there are over *Twelve millions of people* in the area supplied by the Port, which is furnished with all modern facilities for handling Australian products, such as—

**FRUIT, Wool, Wheat, Butter, Frozen Meat  
etc., etc.**

**Australian Shippers are recommended to  
consign their products to the port which is  
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For all information and free booklets concerning either shipments to Hull or travelling by the London and North-Eastern Railway apply to the agent as under—

**BURNS, PHILP & Co. LTD.**

**84-8 William Street**

**MELBOURNE**



tant functions that a plant needs for its healthy development. First, it promotes early and vigorous root development, than which nothing is more essential in our average wheat districts. Secondly, it exercises the greatest influence on seed or fruit-production—i.e., matures the plant, and “finishes the job” of producing the desired crop.

It is because of these two outstanding qualities that superphosphate performs such apparent miracles with the Australian wheat crop every year, which explains the marvellous increase in the sale of this fertiliser in all the States.

But phosphoric acid does not merely start and finish the crop. It is necessary, and most valuable, too, in helping to create a healthy plant. Without an ample proportion of phosphoric acid, almost any plant is apt to grow rank and weedy, especially if over-supplied with nitrogen and potash. Therefore, the special functions of phosphoric acid are to promote root growth and produce the creative part of the plant-seed.

#### NEW AUSTRALIAN FACTORY.

In another part of this issue will be found the two-color full-page advertisement of Messrs. William Cooper and Nephews (Australia) Ltd., whose headquarters are at 4 O'Connell Street, Sydney. The firm has for many years enjoyed a good name in the manufacture of sheep dips and cattle dips. They have now brought the experience of their English and American factories to Australia, for the purpose of establishing a new Australian industry in the manufacture of orchard spraying materials.

The “Cooper” factories outside Australia have for many years manufactured spraying materials for orchard use, notably the parent company—Messrs. Cooper, McDougall and Robertson Ltd., of England, with which is associated the McDougall factory at Yalding, and the factory of William Cooper and Nephews, at Chicago.

The united experience and methods of manufacture of these large businesses, and the patent rights involved, will now be available to the Australian company, which is enlarging its chemical works at Cabarita, near Sydney, and will manufacture there all forms of orchard sprays and remedies for the Commonwealth and export trade.

For this purpose, chemists have been brought from England, including Mr. P. J. Fryer, F.I.C., F.C.S., whose knowledge of this branch of the chemical business is very extensive.

#### NEW SOUTH WALES.

##### ORCHARD NOTES FOR MAY.

**E**VEN the growers of later fruits, such as tableland Apples and Pears, and the inland Prune and Raisin growers, usually have the bulk of their harvesting completed by this month, while the Citrus grower generally has only small lots of early Oranges, Mandarins, or Lemons to send forward, so that the early part of May can generally be looked upon as a comparatively slack time for the fruitgrower generally (state W. J. Allen and W. Le Gay Brereton, in the “Agricultural Gazette of N.S.W.”). It is during such breathing spaces he should look down that list of jobs that have been necessarily deferred during periods when packing and despatching fruit have fully occupied his time, or even during the previous pruning and spraying seasons.

##### Pest Control.

Before closing down the packing shed for the season the deciduous fruit grower should make a final clean-up, so as to destroy, as far as possible, any larvae or pupae of codlin moth or other fruit-eating insects harboring about the shed. All cases or other receptacles that have held infected fruit should be dipped in boiling water for three minutes. The larvae of the codlin moth will work its way between the joints of cases and sufficient time must be given for the boiling water to penetrate. All bags used for packing benches, etc., should be either dipped or burnt.

If the woodwork of the packing benches, etc., cannot be taken down they should be gone over carefully, and any open joints or cracks probed with wire, and finally, if possible, the shed made moth-proof for next spring. It may be thought that if the shed is made moth-proof and all infected cases and packing benches are stored within, dipping and searching is unnecessary, but it must not be forgotten that some of the grubs do not emerge as moths at the normal time in the spring, but remain dormant, and emerge at later periods during the season when it is impracticable to keep the packing shed closed. This cleaning up can, of course, wait till any time before the time of normal emergence in the spring, and so can be kept as a wet weather job during the winter, but the danger then is that it is delayed till the next busy season, and finally is neglected altogether.

The bandages should be left on the trees till late in the winter, for quite

commonly grubs will shift to them from less secure shelter as the cold and wet increases. Such grubs must be destroyed before the spring.

The importance of this thorough clean-up, both in the shed and in the orchard, can be realised if one remembers that the “carry-over” grub is the sole source of infection in the following season, and that one female moth is capable of laying sixty eggs.

It is generally preferable to complete fumigation at an earlier date, but it will still be effective on red scale.

##### Woolly Aphis.

Where woolly aphis has got ahead during the busy picking season, the trees can be sprayed with tobacco wash or one of the commercial tobacco extracts as soon as the leaves have thinned out sufficiently. A high pressure should be used, and a drenching spray secured by holding the nozzle close to affected parts to break up the clusters of the insects. The spray gun or pistol is good for this work, if sufficient pressure is maintained.

If the aphis is thick and the trees large this requires a quantity of spray, much of which collects about the butt of the tree, and for this reason it is preferable to use a harmless spray, such as tobacco wash or one of the commercial extracts, rather than an oil.

Encouraging reports of the results of the parasite *Aphelinus mali* on woolly aphis continue to come to hand.

##### Pruning.

By starting pruning this month on stone fruit trees that have become dormant a longer season is obtained, and often economy of labor can be effected in this way. Moreover, in some districts May is often dry, whereas much bad weather occurs in the later winter months which hampers this work.

It is sometimes claimed that trees pruned early are more likely to break into bloom if a spell of abnormally warm weather follows. However, Departmental experiments have failed conclusively to decide this point.

We are in receipt of a communication from Mr. E. Robinson, 82 Pitt Street, Sydney, informing us that he has been appointed the New South Wales representative for Messrs. Russell and Co., Melbourne, makers of the well-known “Bave-U” power sprayer for orchardists. Mr. Robinson will be at all times at the service of orchardists whose requirements in this direction will be treated promptly.

We place your Fruit  
on the markets of  
BRITAIN direct.



FOR PROFITABLE  
RESULTS —  
consign your fruit to

## The "White" Service

**KEELING & WHITE Ltd**  
Monument Buildings,  
**LONDON, E.C.3**  
Cables, "Keeling, London"

**WHITE & SON LTD.**  
**HULL**  
Cables, "White's, Hull."

**ROGERS, WHITE & CO.**  
Victoria St., Liverpool  
Cables, "Rita, Liverpool."

**White & Leatherland**  
St. Andrews Street,  
**NEWCASTLE-ON-TYNE**  
Cables—Confidence, Newcastle

**FRUIT BROKERS CO.**  
Spiers and White S/A.  
**SABLO 17, ANTWERP**  
Cables—"Spierwhite" Antwerp

Australasian Agents—  
**VICTORIA:**  
**PARNHAM PTY. LTD.**  
60 Queen St., Melbourne

**TASMANIA:**  
**H. JONES & CO. Ltd.**  
Hobart

**SOUTH AUSTRALIA:**  
**GEO. SELTH & McRAE Ltd.**  
Worando Buildings,  
Grenfell St., Adelaide

**WESTERN AUSTRALIA:**  
**PATERSON & Co. Ltd.**  
E.S. & A. Bank Chambers,  
Perth

**NEW ZEALAND:**  
**J. A. REDPATH & SONS**  
Ltd.  
181 Cashel Street, Christchurch  
17 Johnston Street, Wellington  
Hellaby Buildings, Queen Street,  
Auckland  
And Dunedin



### LAND SALE AT LEETON.

An important land sale was held on March 24, of business sites in the town of Leeton, on the Murrumbidgee irrigation areas. The sites, which are centrally situated, are valuable business sites, and have frontages to the main thoroughfares. One corner block, which has a frontage of 71 feet to Pine Avenue, was sold on the freehold basis for £2,130, which works out at £30 per foot. This is the first sale on the freehold basis in the town, the tenure previously having been perpetual lease. The purchasers had the option of bidding for freehold or perpetual lease, and in the case of three of the blocks sold, the purchasers elected to take the land as perpetual lease. In these cases the values ranged from £2,060 to £2,400, working out at from £20 to £22 per foot.

The town of Leeton is rapidly developing. Up-to-date premises have just been built for a new hotel in Pine Avenue, and the Murrumbidgee Irrigation Dairy Farmers' Co-operative Society have recently erected new premises of substantial design and construction.

Recently business blocks held on the leasehold basis have changed hands, the purchasers paying bonuses of some hundreds of pounds over and

above the value of the improvements on the land.

A new convent school, which will be an acquisition to the town, is being erected and a number of private residences are in course of erection. A new State School is being erected at a cost of about £16,000, and it is anticipated, when this building is completed, that it will be one of the finest of its kind in the State.

### THE PRICKLY PEAR AS A COMMERCIAL PRODUCT.

During the war, Mr. George Adams, of Sydney, made very important discoveries in regard to the commercial use of Prickly Pear, and did a lot of practical work on the subject. Had the war continued longer, these discoveries would have been commercialised, and the ending of the war caused a temporary abandonment to market the products of Prickly Pear.

The researches, however, were continued by him all this time. For the last three years, in collaboration with Dr. L. Clarke Webster, of Sydney, further uses have been discovered, notably the use of Prickly Pear in medicines for various complaints—such as coughs, colds, liver and kidney complaints, and diabetes. It offers a big field for still further research in this direction, and in the

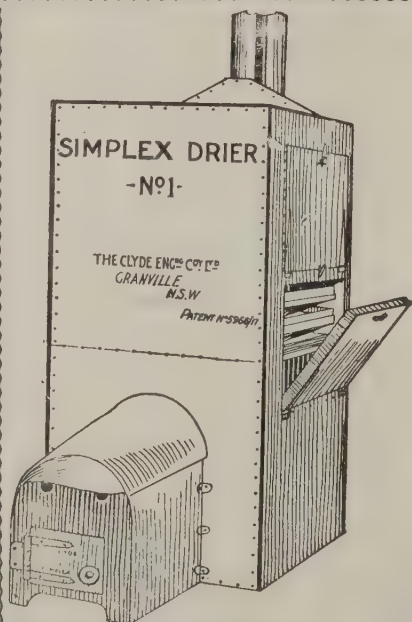
direction of some surgical conditions, notably hydatids.

The uses to which Prickly Pear is being put at present, are as follows:—Cordials, fruit syrups, chutney, sauces, honey, conserves, stock fodder, dog biscuits, fancy biscuits, toffee, hand and face lotions, medicines, oil, luncheon foods, and the greatest of all is the manufacture of high-grade papers.

In the making of our syrups and cordials, we utilise the windfalls, inferior grades and over-ripe fruits, which produces a fine product by the Prickly Pear treatment.

Recently, Dr. Clarke Webster kindly forwarded many samples of cordials and syrups produced from Prickly Pear, and we would gladly welcome readers to call at our Sydney office, 8 Bridge Street, and inspect same.

Dr. Webster also showed our Sydney manager a process by which fruit for export to any part of the world can be carried in excellent condition, without deteriorating in the slightest. The system is the coating of each fruit at the packing sheds with a very light liquid, which keeps the air intact within the fruit, thus preventing the fruit losing its condition.



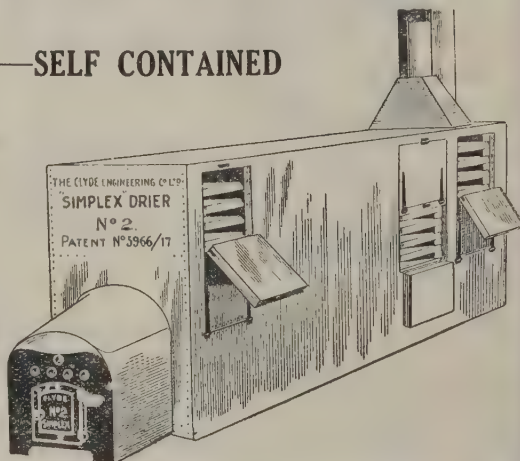
## The Clyde Simplex Driers

For Drying  
Fruit, Vegetables and other Products

NO MORE WASTE FRUIT OR VEGETABLES

SIMPLE — SELF CONTAINED

Made in Sizes to suit  
Householders  
Small Orchardists  
or  
Large Factories



The Clyde Engineering Co. Ltd.  
GRANVILLE, N.S.W.

# The Fruit Trade

Market Reports and News Items.

**REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS,**  
Advertising in this Journal.

## NEW SOUTH WALES.

### Sydney.

Chilton, F., City Fruit Markets.  
Greenberg, S. & M., Fruit Markets.  
Jenkins, John, Fruit Exchange.  
Louey Pang & Samuel Wong Ltd.,  
Thomas St., Haymarket.  
Rule & Beavis, Fruit Exchange.

### VICTORIA.

### Melbourne.

Coastal Farmers' Co-op. Society, Western Market.  
Cave, F., & Co., Melbourne.  
Davis, J., Western Market.  
Dennys, Lascelles Ltd.  
I.F. & M. Co. Ltd.  
Lister, G., Western Market.  
Millis, A., & Sons, Western Markets.  
Mills, J. B., & Co., 9 Queen St.  
Mumford, J. G., 449 Flinders Lane.  
Pang & Co. Ltd., H. L., Little Bourke Street.  
Silbert, Sharp & Davies, Western Markets.  
Stott & Son, T., Western Markets.  
Tim Young & Co., Western Market.  
Vear, F. W., 49 William Street.  
Wade & Co., H. M., 471 Flinders Lane.  
Woolf, G., Western Market.

### QUEENSLAND.

### Brisbane.

Barr, A. S., Fruit Exchange.  
Collard & Mackay, Fruit Exchange.  
Cooksley & Co., Fruit Exchange.  
Finlayson & Son, Fruit Exchange.  
Geeves, H. V., Fruit Exchange.  
Robsons Ltd., Fruit Exchange.  
W. J. Whitten & Co., Fruit Exchange.

### TASMANIA.

### Hobart.

Jones & Co. Ltd., H., Fruit Exporters.  
Port Huon Fruitgrowers' Assoc.  
Peacock & Co. W. D., Fruit Exporters,  
and at London.

### Launceston.

Bender & Co. Pty. Ltd., 110 Elizabeth Street.

### WEST AUSTRALIA.

### Fremantle.

Simper, H. J. & F. Ltd.

### SOUTH AUSTRALIA.

### Adelaide.

Silbert, Sharp & Bishop Ltd.

### NEW ZEALAND.

### Auckland.

Turner & Growers Ltd., City Markets.

### Dunedin.

Co-operative Fruitgrowers' of Otago Ltd.  
Paterson, Thos., & Co., Vogel Street.  
Reilly's Central Produce Mart.

### ENGLAND.

### London.

Dennis & Cooper Ltd.  
Jacobs, E., & Sons, Covent Garden  
Joel, R., & Sons, 16, 17, 20 Russell St.,  
Covent Garden.  
Margotson & Co. Ltd., Covent Garden.  
Monro, Geo., Ltd., Covent Garden.  
Ridley, Houlding & Co., Covent Garden.  
Springer, Barney.  
Swann & Co., 3 Salter's Hall Court.

### Null.

White & Son Ltd.

### Poventry.

Roswell Bros. & Davis.

### Manchester.

North of England Fruit Brokers Ltd.  
—Australian Agent, N. V. Wade, 8  
Bridge St., Sydney, N.S.W.

### GERMANY.

### Bremen.

Fruchthandel, Gesellschaft.

### Hamburg.

A. neimer, P. H. & Son, Fruchthof.  
Lutten, J. H., & Co., Hamburg.  
Stier, Aug., Fruchthof, Repr. J. B. Mills  
& Co., 9 Queen St., Melbourne.

## British and Australasian Market Reports.

### AUSTRALIAN FRUIT IN ENGLAND.

#### Great Britain.

#### London (13/4/26).

Cabled advice stated that the Apples which arrived by the steamer "Cathay" were generally of good quality, but somewhat immature. Victorian Jons, realised 12/- to 14/6 a case; Cleos., 15/- to 16/-; Cox's, 12/6 to 18/-; Dunn's, 11/6 to 13/6; Rymers, 10/6 to 13/-; London Pippins, 12/6 to 14/-; Tasmanian Ribstons, 8/6 to 10/6; Cox's, 15/- to 18/6; Alexs., 9/6 to 10/6; King Pippin, 11/6; and Alfs., 9/6 to 10/6 a case. Of Victorian Pears by the steamer "Northumberland," Williams, Doyenne du Bussock were mostly overripe and practically worthless, but others were in good condition. In half-cases, Caps. realised 7/9 to 10/6; Anjous, 11/- to 12/-; Boscs, 10/- to 11/6; and Howells, 8/3 to 9/-; in cases, Vicars realised 11/6 to 12/6; Caps., 15/- to 15/6; Anjous, 17/- to 20/-; Boscs, 21/- to 23/-; a few sound Bussocks, 18/- to 21/-; and Williams, 18/6 to 22/- a case.

#### London (18/4/26).

Cables dated April 19, stated that the Australian fruit arriving by the steamer "Otranto" was mostly in excellent condition. West Australian Apples realised:—Cleos., 13/- to 15/- a case; Jons., 9/- to 13/6; Dunn's, 13/6 to 14/6; King Davids, 12/-; Grapes, in three-quarter cases—Black Malaga, 15/- to 18/-; Almeria, 20/- to 21/-; Red Prince, 15/- to 16/- Victorian Apples brought:—Jons., 9/- to 12/6 a case; Reinettes, 7/6 to 8/6; King Davids, 9/6 to 11/-; Cleos., 12/6 to 13/- Tasmanian Worcesteres, which were rather soft, sold at 6/9 to 10/6; Cox's, at 10/- to 15/-; Cleos., at 11/- to 14/-; Ribstons, 8/- to 11/-; Mobbs, 7/6 to 10/-. New South Wales Pears were generally in good condition, and brought 7/- to 9/- a tray, some Boscs being rather overripe.

#### London (21/4/26).

The Apple market is easier, owing to the existence of large supplies. Those which arrived by the steamer "Euripides" were in good condition. West Australian Jonathans brought 9/6 to 13/- a case; Cleos., 13/6 to 15/6; Dunn's, 15/-; and Cox's, which

were pitted, 9/6. Victorian Jons. realised 8/- to 10/6 a case, and Alfs., 7/6 to 10/-. West Australian Pears were in very good condition. Boscs. were sold at 6/- to 6/3 a tray; Comice, 7/3 to 9/6; Marie Louise, 5/- to 6/6; and Clairegeau, 4/9 to 5/3. In cases, Winter Bartletts realised 18/6; Nelis, 18/-, and Vicars, 14/- a case. Some W.A. Grapes were worthless, but all sound fruit brought 16/- to 25/- a case. Victorian Pears were mostly overripe, and some were valueless. Packhams were sold, according to condition, at 13/- to 20/- a case; Boscs, at 5/- to 21/-; Winter Cole, at 7/6 to 15/-; Vicars, at 9/- to 15/6; Anjous, at 5/- to 20/-; Clairegeau, at 5/- to 17/-; and Glou Morceau, at 12/6 to 16/- a case.

#### London (26/4/26).

Further cables, dated April 26, stated that the Apple market was slightly firmer, the fruit arriving by the steamers "Naldera" and "Norfolk" being generally of good quality. Tasmanian New Yorks brought 12/6 to 13/6 a case; Cox's, 13/- to 15/-; Jons., 10/- to 11/-; Crabs, 10/- to 10/6; Alfristons, 11/6; and others, 7/9 to 10/-. W.A. Cleos. sold at 14/6 to 15/-; Jonathans, 11/6 to 13/-; Dunn's, 13/- New Zealand Jonathans ex the "Norfolk" realised 10/- to 12/6 a case; Dunn's, 9/- to 11/-; and Cox's, 9/- to 15/-.

#### Liverpool (22/4/26).

Fruit shipped by the s.s. "Ascanius" was landed at Liverpool. South Australian and Victorian fruit was somewhat overripe. Cleos. realised 11/- to 15/- per case; Jons., 9/- to 11/3; Dunn's, 10/- to 12/-; Reinette du Canada, 7/- to 8/6. Several varieties of Tasmanian fruit showed immaturity. Cleos. brought 12/- to 14/6; Alf., 10/- to 11/9; Cox's, 8/9 to 10/6; Alex., 7/9 to 8/6; Ribston Pippin, 7/3 to 9/6; Mobb's, 7/9 to 9/3, and Worcesteres, 9/- to 10/9.

#### New South Wales.

#### Sydney (22/4/26).

Mr. F. Chilton, City Fruit Markets, reports under date 22/4/26, as follows:—

Queensland Fruits.—Bananas, 18/- to 34/- per case; Pines, Smoothleaf, 10/- to 18/-; Custard Apples, 4/- to 8/- per quarter case. New South Wales Fruits.—Bananas, 18/- to 36/- per case; Lemons, 7/- to 12/- per bushel case; eating Apples, Jonathan, 6/- to 12/-; F.C.P., 3/- to 9/-; Del., 6/- to 12/- G.S., 9/- to 14/-; cooking Apples, green varieties, 5/- to 8/-; Pears, Packham Triumph, 8/- to 14/-; Quinces, 3/- to 7/-; Oranges, second crop, 3/- to 14/-; main crop, 6/- to 11/-; Peaches, 3/- to 6/- per half case; Passions, 5/- to 18/-; tomatoes, 4/- to 12/-; Grapes, Black Muscat, 3/- to 10/-; White Muscat, 3/- to 8/-;



White Sherry, 4/- to 6/-; Persimmons, 3/- to 5/-. Victorian Fruits.—Apples, Jonathan, 6/- to 9/- per bushel case; Lemons, 9/- to 14/-; Peaches, 6/- to 11/-. Tasmanian Fruits.—Apples, Alf., 6/- to 8/-; D.C., 6/- to 7/6; F.C., 6/- to 10/-; Jonathan, 6/- to 10/-; Cleo., 7/- to 10/-; Del., 6/- to 9/-; Pears, W.N., 3/6 to 6/- per half case; G.S., 3/- to 5/-; B.C., 3/- to 4/-; W.C., 4/- to 6/-; Duchess, 3/6 to 5/-.

#### Victoria.

Melbourne (27/4/26).

The following are the prices ruling at the Western Market:—Grapes, special dry Walthams, 12/- to 17/-; Gordos., 8/- to 10/-; Apples, special Jonathan, 8/- to 10/-; Standard, 6/- to 8/-; special Delicious, 10/- to 12/-; Standard, 8/- to 10/-; Pears, special dessert, 9/- to 11/-; Tomatoes,

others, 5/- to 7/6; Keiffers, 4/- to 6/-; Josephines, 3/- to 7/-; other varieties, 2/- to 5/-; Quinces, dumps, 4/6 to 8/-; flats, 3/6 to 4/6; Oranges, prime flats, 12/- to 16/9 (choice to 18/9); others, 8/- to 11/-; Lemons, prime flats, 4/- to 6/9; others, 2/6 to 4/-; Passion Fruit, dumps, 16/6 to 18/-; flats, 12/- to 15/-; half-dumps, 7/6 and 13/9; half-flats, 12/-.

#### Tasmania.

Hobart (24/4/26).

N.Y.P., choice, 6/- to 7/-; medium, 5/- to 5/9; Delicious, medium, 5/- to 5/6; S.P.M., fair, 5/- to 5/9; Jonathan No. 1, fair, 6/- to 6/1; medium, 5/- to 5/9; C.E., 2/7 to 4/5; F.C., 5/- to 6/-; S.T.P., medium, 4/- to 4/6; L.S. No. 1, good color, 5/- to 5/6; C.O.P. No. 1, fair, 4/- to 5/-; Pears, G.M., 4/- to 6/-; B.B., 5/- to 6/9; G.S., 3/- to 3/6; W.N., 6/- to 7/6; W.C., good, 6/- to 7/-; N.P., 3/- to 4/6; B.D., 2/6 to 4/-; B.C., 3/- to 3/9 case.

#### Queensland.

Brisbane (22/4/26).

Apples, cooking, prime, 7/- to 12/6; others, 3/- to 5/- a bushel case; eating, prime, 9/- to 12/-; others, 3/- to 6/6; Lemons, prime, 3/- to 5/-; others, 3/6 to 5/- a quarter case; Mandarins, 15/- to 16/-; Oranges, 6/- to 11/-; Navels, 6/- to 7/- a quarter case; Pears, 10/-; Pineapples, smooth leaf, prime, 10/- to 14/-; others, 7/- to 9/- case; rough leaf, prime, 8/- to 12/6; others, 6/- to 7/6 a doz., 10/- to 14/- case.

#### New Zealand.

Dunedin (15/4/26).

Messrs. Reilly's Central Produce Mart, Dunedin, reports, under date 15/4/26, as follows:—

Apples, Delicious, 12/-; Cox's Orange, to 12/6; other desserts, to 8/-; choice cookers, to 7/-; others, to 4/-; N.Z. Passion Fruit, 10/6; Lemons, Italian Bushels, 22/6; Oranges, Italian Bushels, 27/6; Bananas, ripe, 35/-; Green Suvas, 22/6; Raratonga, 25/-; Pears, choice desserts, to 3½d.; others, to 2½d.; cookers, to 2d.; Quinces, 2d.; Grapes, local Gross Colmars, to 3/-; Hamburgs, to 2/-; Oamarus, to 1/7½; Tomatoes, firsts, to 8d.; seconds, to 5d.; Otago Centrals, to 4d.; Christchurch, to 3d.; Plums, Coe's Late Red, 4d.; desserts, 5d.; Peaches, choice desserts, to 8d.; bottling, to 5d.

#### AUSTRALIAN SCIENTIST HONORED.

International Science Congress Claims  
Prof. McAlpine as Honorary  
Chairman.

Professor D. McAlpine, so well known for his work in connection with plant diseases, has received the following letter from the Chairman of the Executive Committee (B. M. Duggar), of the Missouri Botanical Gardens:—"I take great pleasure in conveying to you the greetings of

## Classified Advertisements.

### Wanted and For Sale.

Prices for Advertisements under this heading are as follows:—

Casual Advertisements, one to six words, 2d. per word. Contract Advertisements, twelve months, 1½d. per word.

**W**ANTED.—Applications will be received from those interested in acting as Sub-agents or Travellers on commission for a line of high-grade Orchard Machinery (in N.S.W.).—Reply, giving full particulars to "Machinery," Box 3024, G.P.O., Sydney.

**POSITION WANTED** by practical Orchardist; married; 12 years among Citrus and Summer Fruits; seeks engagement as Working Manager or Overseer. Available from May 1; good credentials.—Apply, No. 666, c/o this journal.

the Executive Committee of the International Congress of Plant Sciences, to be held at Ithaca, New York, August 16-23, 1926, and I have the honor of informing you of your appointment as an Honorary Chairman of the Congress."

To be appointed Honorary Chairman of such an important scientific gathering is a high honor, not only to Professor McAlpine, but also to Australia.

## PEDIGREE FRUIT TREES

### CITRUS

APPLES, APRICOTS, PRUNES,  
PEARS, PLUMS, PEACHES, etc.

### QUALITY PRIME

Correspondence Invited  
Orders Being Booked  
Send for Our Catalogue  
The Most Up-to-date  
in Australia

**F. Ferguson & Son,**  
Australian Nurseries,  
Hurstville, N.S.W.

## J. G. MUMFORD

(Established 1906)

### Fruit & Vegetable Salesman

Account Sales Posted Daily

### APPLE EXPORTER

"Fruit Exchange,"

449-451 FLINDERS LANE

Branches { Western Market  
Victoria Markets

MELBOURNE

Reference—Satisfied Growers in all States

special, 7/- to 9/-; Standard, 4/- to 5/-; Lemons, special, good counts, 12/- to 14/-; Standard, 8/- to 10/-; Bananas, choice, 24/- to 28/-; special, to 30/-; Standard, 14/- to 20/-; Pineapples, Queen, choice, 18/- to 22/-.

#### South Australia.

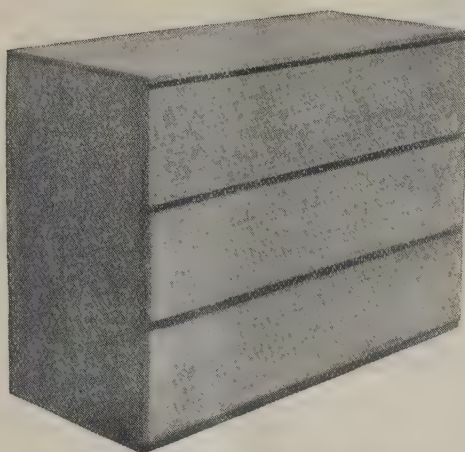
Adelaide (22/4/26).

Apples, eating, 6/- per case; cooking, 5/-; Grapes, dark, 9/-; Lemons, 9/-; Oranges, common, 10/-; Passion Fruit, 34/- to 35/-; Peaches, 9/-; Pears, eating, 9/- to 10/-; cooking, 6/- to 7/-; Pineapples, 18/-; Quinces, 4/-.

#### Western Australia.

Perth (15/4/26).

Apples, Jonathans, prime dumps, 7/6 to 12/9; flats, 5/6 to 6/6; other dumps, 4/- to 7/-; flats, 3/- to 4/6; Dunns, prime dumps, 7/- to 9/9; flats, 5/- to 6/-; other dumps, 5/6 to 6/6; flats, 4/-; Cleopatras, prime dumps, 7/- to 11/3; flats, 5/6 to 7/-; other dumps, 4/6 to 6/6; flats, 4/6; Delicious, prime dumps, 7/- to 10/-; Granny Smiths, prime dumps, 9/- to 12/6; flats, 7/- to 8/-; other dumps, 7/-; King Davids, dumps, 10/9; Pears, Bartlettts, prime flats, 7/6 to 12/6;



Australian Apple and Citrus Dump Bushel Case.

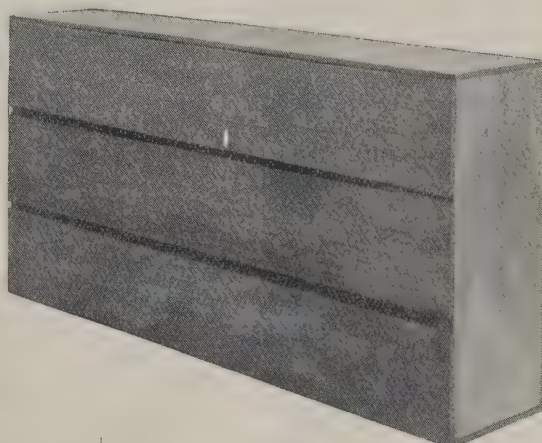
## SOFTWOOD CASES

(IMPORTED)

*Cheaper than hardwood if exported.**Cut to Australian Standard Sizes*DUMP BUSHEL with one piece top and three equal piece sideUPRIGHT BUSHEL with one piece top and three equal piece sideDRIED FRUIT CASE with one piece side and two equal pieces tops and bottomsCANNED FRUIT with one piece side and two piece tops and bottoms

### SOME ADVANTAGES IN FAVOR OF IMPORTED CASES

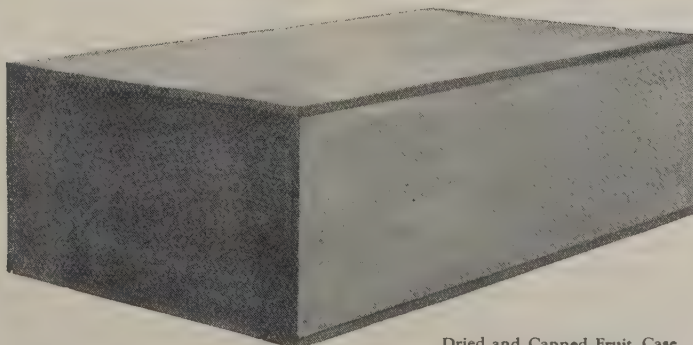
- (1) Full drawback of duty allowed on all cases exported.
- (2) 1/3rd less freight than on Hardwood cases.
- (3) 25% rebate on rail freight for full trucks.
- (4) All timber cut to exact sizes making it an easy matter to assemble a symmetrical case.
- (5) Every piece of timber fit and ready for use, thereby eliminating waste.
- (6) Can be supplied in shooks or made up and branded.



Upright Bushel Case with Centre Partition.

Particulars from the Largest Importers

## Overseas & Interstate Trading Co. Ltd.



Dried and Canned Fruit Case.

22 Market Street,  
Melbourne

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Phone Central 9110

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Also  
King William Street,  
ADELAIDE





## Second year hens lay twice

as many eggs as they did in first year—  
due to Karswood Poultry Spice.

**A**MONG poultry breeders, it is a well-known fact that first-year hens lay many more eggs than those of the second year, that is, under ordinary conditions. To reverse that position and enable a number of hens to lay twice as many eggs in their second year as they did in their first year is the wonderful result achieved by the use of Karswood Poultry Spice (which contains dried and ground insects). This was the happy experience of Miss Short, of North Manly, a keen poultry owner, and now an enthusiastic believer in Karswood. Below we quote her testimonial. Read it and note her opinion, based on actual results, of Karswood:—

### Twice as Many Eggs.

Dear Sirs,—

Your advertisement in the "Evening Sun" this week came to my notice. I have a small poultry farm, and am a very enthusiastic user of Karswood. My first trial of it was on a yard of second-season hens, the result was they gave as many eggs in that season as they gave in their first season.

I find it brings the young table birds on very rapidly; at three months old on Karswood they are equal in size to five months' old without Karswood. That means a smaller feed bill and quick returns.

I am overstocked with the empty 7lb. tins, and am wondering if you have any idea of collecting and buying the tins back again; it is rather a problem how to dispose of them, and they are too good to throw away.—Yours faithfully,

(Sgd.) MISS M. SHORT.

Corrie Road P.O., North Manly.

### Abundance of Eggs.

Dear Sirs,—

I got a couple of 2/- packets of Karswood Poultry Spice about a couple of months ago, and I found it did all you say in the advertisement in the "Producers' Review." Our poultry had not been laying for months, and exactly three weeks after using the spice we got abundance of eggs; the poultry improved in

a wonderful manner. We are now giving it to young chicks, and it is splendid growing mixture, and puts life and energy into them. Please send by rail to Bruce Rock, one 7lb. tin of Karswood Poultry Spice, 14/-; also 3 packets of Pig Powders (Karswood), 4/-.—Yours faithfully,

(Sgd.) E. H. TOMKINSON.

Kummin, W.A.

### Doing Splendidly.

Dear Sirs,—

Would you be kind enough to send me one case of Karswood Spice, the same as I had before, and at the same price. I have great faith in this food, and my fowls are doing splendidly, so shall keep on with it.—Yours faithfully.

(Sgd.) T. R. STONE.

"Bourree," Rooty Hill.

### "40 to 50 Eggs Daily from 65 Hens."

This fine performance is definitely attributed to the use of "Karswood" Poultry Spice, and one can easily understand the enthusiasm of the testimonial which Mrs. Jackson sent along, and which we have pleasure in quoting:—

Dear "Poultry,"

I was much interested in a letter from a Queensland correspondent re feeding "Karswood" Spice to pullets, and thought my own experience might

be helpful. I began to feed "Karswood" to my chicks at six weeks old as an experiment, having heard it always very highly recommended in England. My chicks have given no trouble in rearing, and commenced laying from 4½ to 5 months of age, a good-sized egg with no "pigeon" eggs among them. They are laying well on a simple mash of two-parts pollard and one-part bran with wheat for evening grain—and now, whilst my hens are moulting I give them an extra mid-day mash to keep them in heart. I have refrained from any outlay in ready mixed mashes or meatmeal, etc., my one extravagance has been "Karswood" Poultry Spice, and they get it regularly every morning according to the directions, and I am sure it more than pays for its cost. From 65 hens, with which I commenced, I have been getting from 40 to 50 eggs daily, and have reared 200 pullets. I give Epsom Salts and Sulphur alternately every third morning. They are kept on free range, as we have an orchard.

Yours, etc.,

(Sgd.) MRS. ELSPETH JACKSON.  
"Sunnyridge Orchard."

### 480 Eggs—7 Hens—

May—November.

Dear Sirs,—

My fowls started laying in May, and up to the present they have laid 480 eggs. The number of fowls I have is seven white Leghorns.

(Sgd.) A. A. LEE.

339 Albert Street, Brunswick, Melbourne, Vic.

### Make This Test.

Go to your local grocer, storekeeper, or produce dealer. Get a 1/- packet of Karswood Poultry Spice, and give it to half-a-dozen of your birds, in accordance with the directions on the packet. Do not expect immediate results—Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

### Note the Economy.

Karswood Poultry Spice is obtainable from all stores and poultry food suppliers at the following standard prices: ½ lb. packet, Price 1/- 1lb packet, Price 2/- 7lb. tin, Price 13/- 14lb. tin, Price, 25/- 28lb. tin, Price 48/-.

### Supplies.

- 1/- packet supplies 20 hens for 16 days.
- 2/- packet supplies 20 hens for 32 days.
- 13/- (7lb. tin) supplies 140 hens for 32 days.

If your local dealer cannot supply you, write direct to any recognised Wholesale House, adding postage—6d. on ½lb. packets, and 9d. on 1lb. packets—to above prices.

## Poultry Notes.

The value of green feed does not receive the thoughtful attention it deserves from the average poultry-keeper. Its functions are barely understood, and its feeding and general properties insufficiently appreciated. One of the poultry-keeper's main considerations, whether he keeps a small number of fowls for household purposes in the way of eggs, and an occasional bird for the table, or whether he goes in for poultry as a commercial proposition, should be to make provision for a regular and plentiful supply of green feed all the year round, sufficient for the full requirements of his birds. Fowls can exist without green food or vegetable food of any description, but they will do much better in all respects if a supply of green food forms part of their daily ration: on the other hand, fowls will also exist on a diet composed mainly of all green stuff, but results, as far as eggs or condition are concerned, will be more than disappointing. On this score, however, we need not have much fear as, generally speaking, birds do not get anything near the amount of green feed they should consume to their benefit as well as that of their owners.

It is most essential in keeping the birds—young or old—in good health. Giving them an occasional big feed of green stuff may lead to bowel and crop troubles, as they are liable to gorge themselves.

The breeding pen requires liberal supplies of green feed, without which the hens will get over fat, particularly so the heavy breeds, such as the Orpingtons, Plymouth Rocks, Rhode Island Reds, etc. Such condition, though not affecting the fertility to any marked degree will certainly be responsible for poor hatches, in the way of "dead in the shell" and weak constituted chicks.

Some breeders give their stock birds a liberal supply of green feed at mid-day. This is the correct procedure if they stopped at that, but unfortunately they go further and give it to them in a moist state, dried up with pollard. The consequent result is poor hatchings.

Growing stock greatly benefit by an abundance of green feed. Bulk is essential for internal development, which will later give the hen the necessary capacity to consume large

quantities of food. The egg being produced out of the food digested by the hen, it stands to reason that a heavy layer must necessarily be a big eater. It does not, however, follow that a big eater is a heavy layer, because in some hens, especially those of heavy breeds, a large proportion of food required to produce eggs is turned into fat. There should be no room for such birds in the breeding or laying pens.

Young birds fed liberally on green feed are less subject to attacks of chicken-pox than those fed scantily or totally deprived of it. Laying hens will lay more eggs when green food is given in abundance, and their eggs will have that rich dark color, which denotes "quality." Again, bulk feeding has a great influence in producing large-sized eggs.

Where a liberal allowance of green food enters into the daily ration, the feeding costs will be materially reduced, a factor of vital importance at the present prices of grain and mill offal.

Lucerne, Berseem and other clovers are undoubtedly the best of green foods. The former takes pride of place, as, once established, it can be cut all the year round, particularly so in the summer months, and a stand of lucerne will last for a number of years, provided proper attention is given it in the way of cultivation, fertilisers, and a plentiful supply of water. The nutritive value of clovers is higher than that of other green foods.

Cape-weed is greatly relished by poultry. Rape, green maize, lettuce, cabbage, green barley, and silver beet are all very suitable providing they are fresh, clean, and sound, and fed in conjunction with lucerne they afford variety and increase palatability. Lawn clippings may also be fed to poultry when other green-stuff is not available.

In the absence of green feed, lucerne chaff makes a good substitute for adult birds. It should, however, be steeped overnight in boiling water for use next morning in the mash. Of course it can never take the place of fresh green foods.

The amount of greens to be given young stock will depend on their age. From the second week add finely-cut succulent stuff to their mash, by preference lettuce, barley, oats, and

gradually increase the quantity until 12 weeks old, when they should be fed same as for adults. The latter should have not less than 40 per cent. of it in their mash in winter, and 50 per cent. in summer—bulk measurement.

If in the middle of the day and after their grain ration in the evening, the birds are given as much of it as they will eat, better results will be recorded. The finer the cut the shorter the fibre, which adds to its digestibility and lessens crop troubles.

### FEATHER-EATING IN FOWLS.

Feather-eating in poultry is a trouble which may be brought on by many things. In some cases it is an acquired habit; in others it is brought on by some deficiency in the ration, such, for instance, as common salt. It may also be the result of overstimulation by feeding condiments. Want of sufficient shell-grit is still another cause, while many cases occur where the causes are obscure, and not easily accounted for. Feather-eating rarely occurs among poultry run on free range, but it is a most conspicuous feature with poultry confined to small yards where no scratching material is provided. Placing the perches too close is a very frequent cause, and it is likely to accentuate the trouble once it has started.

Very little can be done that is likely to break the birds of this habit, except to find out the deficiency and remedy it. The birds will usually remain in that condition until they have moulted. Dipping in a weak solution of bitter aloes will sometimes help matters.

### LIVE STOCK.

#### The Grain Sorghums.

##### As Feed for Stock.

The grain Sorghums are adapted to warm, dry conditions, and are specially useful in districts where Maize for grain or green feed cannot be successfully grown, states the N.S.W. Department of Agriculture. In early times the seed of these Sorghums formed one of the chief sources of food for mankind, and was grown largely in India, China and Egypt; but as the use of the grain as an article of man's diet diminished, the cultivation of these Sorghums, the stems of which are pithy, became less extensive, farmers turning to the sweet or saccharine varieties for providing green feed for stock.

The chief characteristics of these Sorghums are:—

1. They set grain freely, even under adverse conditions.



2. They are remarkably hardy and withstand drought well.

3. The stalks are valuable as roughage for feeding to stock.

4. The nutritive value of the grain is only slightly lower than that of Maize grain.

**For Promptness, Reliability  
and Careful Attention**

CONSIGN YOUR FRUIT TO

**RULE & BEAVIS**

FRUIT EXCHANGE,  
SYDNEY, N.S.W.

A TRIAL SOLICITED.

Shipping Number, 80.

Estab. 1888

### GRAPE FRUIT AS AN AID TO TEETH.

Answering a recent questionnaire, 154 leading dentists of the country agreed that the eating of grape fruit tended greatly to improve the condition of the teeth, states the "Florida Grower."

Grape fruit especially, it was said, stimulates the secretion of saliva and keeps the mouth alkaline as it should be. It increases resistance to tooth decay.

It has been found by laboratory experiments on small animals that a lack of food elements afforded by grape fruit in the diet brings profound changes in the structure of teeth. Without these elements the teeth suffer a fibroid degeneration of the pulp, the fine cellular connecting tissues of the teeth being replaced by a sponge-like structure devoid of distinct cells.

### Not the "Old Man."

Your father, whom you affectionately call "Dad," may look a little threadbare when it comes to the question of fashionable clothes. His trousers may bag at the knees and his fingernails be a little long and not polished, but remember, my boy, he is not "The Old Man."

You may call him "Governor," but he is the man the greatest woman in all the world elected to a high office in the home circle. To call him "The Old Man" is not only disrespectful, but it discounts you.

Your father's hair may be thin and gray, his pipe a bit strong when compared with your perfumed cigarettes—but should you dare to call him "The Old Man," you harm yourself.

He may be too tired after dinner to sit up and wait for your early-morning return, but he will be up and on the job next morning while you are probably sleeping off that tired feeling.

Keep this little line always before you—

"Whoever makes his father's heart bleed,  
Shall have a child that will avenge the deed."

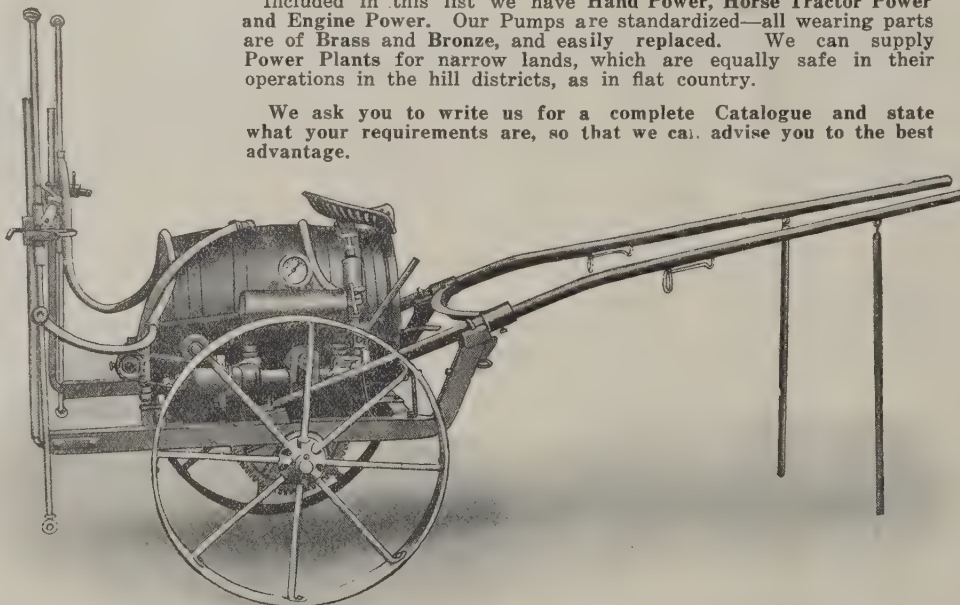
Father is not "The Old Man"—your dear old "Dad" is "Some Man."—The Berlei Review."

## METTERS NUFREND SPRAYING OUTFITS

We are taking this opportunity of introducing ourselves as makers of SPRAYING OUTFITS as an adjunct to our many other lines. WE HAVE A CATALOGUE OF SPRAY PLANTS which should fill any requirements in the VINEYARD or ORCHARD, also for the BLOWFLY PEST.

Included in this list we have Hand Power, Horse Tractor Power and Engine Power. Our Pumps are standardized—all wearing parts are of Brass and Bronze, and easily replaced. We can supply Power Plants for narrow lands, which are equally safe in their operations in the hill districts, as in flat country.

We ask you to write us for a complete Catalogue and state what your requirements are, so that we can advise you to the best advantage.



Catalogues posted free to any Address.

**METTERS LIMITED,** 142 Rundle St., ADELAIDE, S.A.

Victorian and Tasmanian Agents—The FARM & PASTORAL SUPPLIES Pty. Ltd., 500-2 Bourke St., Melbourne.

## WHY BOYS LEAVE THE FARM.

## How Should the Drift be Stopped?

In the course of a discussion on the city-ward drift of rural population at a meeting of the Goode Branch of the Agricultural Bureau of South Australia, it was stated that farmers had pioneered without agricultural knowledge, with poor implements, lack of finance, and many more difficulties which had to be surmounted before success could be attained. They often their sons would relieve them of their past strenuous duties, and later on take full control when things were running more smoothly.

But to the keen disappointment of the farmer, the boys left the farm when they would be most useful, and fostered the thought that some day went to the cities. To the farmer that was a calamity, but very often it was his own fault.

The farmer might be a good worker and farmer, but too frequently he overlooked the social side of farm life.

## Science in Agriculture.

The paper then read as follows:—"Do we take our boys sufficiently into our confidence, tell them what we propose to do, and how the work is to be done? Do we give them any actual and practical interest, and responsible jobs to do, which, in doing, make them feel that they are doing something of practical use on the farm? Farming is a serious business, but do we take the trouble to initiate the boys into its mysteries of moisture conservation, soils, seasons, seed, machinery, sheep, buying and selling, etc? If this is done, farmers would be gradually instilling into young minds the best knowledge of farming they can get. Then our sons will know why things have to be done, and will do the work intelligently and with added pleasure.

Do we give the rising generation sufficient time for recreation and amusement? Do we keep them going six full days a week, and possibly a portion of the seventh? It is only natural that the young folk should be

allowed to seek good company of others of their own age."

## Recreation is Necessary.

Continuing, it was stated that the boys would be quick to realise that, during the busy seasons, they could not expect many afternoons off for recreation, but could do so during the mote districts, where football, cric-slack periods. Even in the very reket, or tennis would be practically impossible, hunting very often provided a healthy form of amusement for both old and young, and, with the advent of wireless, a very enjoyable evening could follow for the whole family.

Wherever possible, music should be in every home. A pianola was a valuable instrument, on which all the latest music could be played. Many farmers were apt to say, "Who gave us these amusements and time for recreation?" In the days of early settlement the entire family worked on the farm. Little time was spent in going to school, in reading, or in travel. The few farm tools were so crude, and the farming so poorly done, that a family raised little more in value than it consumed, worked as hard and as long as they could, and even then the family was often threatened with famine.

## Improved Farm Methods.

In those days farming was largely a question of man and animal power persistently toiling hour after hour. Implements were primitive, motor-cars were in their infancy, telephones an expensive luxury, lighting installations imperfect, super. untried and unpopular. To-day they were essentials.

Conditions had changed, and the boys were living in a mechanical and scientific age, an age where everything was done to save time, to reduce expensive and irksome labor, to make life easier, and conditions more enjoyable. With better farming, fewer farmers were needed, for statistics showed a greater production per head. That placed the present-day farmer in a position far ahead of his forefathers.

## Changed Conditions.

Life to-day was more comfortable, more time was provided for recreation, and they found themselves in a position to partake of the essentials and sometimes of the luxuries that life now afforded. He thought it advisable to give each farm boy a choice of occupation, especially if he showed an adaptability to such occupation. They should, of course, first try to initiate him into farming pursuits, but should that prove fruitless, then the lad should be given his choice.



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Kills  
Aphis

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40% Nicotine



It had long been recognised that for every farmer three men were required in the city to handle his products, and turn them into commodities. With the latest power farming, improved implements, and motor cars, it would probably take six men in town to handle his products and supply his wants. Therefore they should not be alarmed when a drift to the cities was noticed. The price of farm products would always have a great influence on the drift either towards the country or city. It could be deduced that it did not altogether rest with the farmer to find out the solution for retaining the young farming generation; much would depend on the foresight of the Government in finding suitable markets overseas before over-production was experienced.

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SOUTH MELBOURNE.

## Pear Vinegar.

### Some Helpful Hints.

Vinegar making depends on two fermentation processes. The first is a transformation from sugar to alcohol, and carbonic acid gas by yeast. The second is the conversion of the alcohol into vinegar acid.

Fruits should be thoroughly crushed in a food chopper or fruit crusher. Very ripe Pears are easily crushed with the hands or with a Potato masher. Cores and peels give good results if two cups of water are added to each cup of fruit, the mixture boiled until fruit is tender, pressed and sweetened with one-half cup sugar to each four cups of juice.

Add one pint of barrel vinegar or store vinegar to each gallon of fermented liquid, after drawing it off from the yeast sediment. Addition of several pieces of vinegar mother also assists the start of vinegar fermentation.

The mixed vinegar and alcoholic liquid must be so placed that a large surface is exposed to the air. If the liquid is in a bottle the bottle should only be filled two-thirds full and must not be corked. A cloth only should be placed over the mouth of the bottle to keep out insects. A stone-ware crock or glass fruit jar can be used. Cover with cloth only. If a barrel is used, leave bung open and fill barrel only two-thirds full. Vinegar fermentation proceeds most rapidly in a warm room at 75 to 90 degrees Fahrenheit. At this temperature vinegar will usually form in about

three or four months. It is then ready for filtration and use.

Vinegar is greatly improved in flavor by storing for one year in well filled closed wooden barrels. If the vinegar is for home use it may be made sufficiently clear by straining through heavy cloth.—Home and Farm Food Preservation, by W. V. Cruess, U.S.A., in "California Cultivator."

If large amounts of vinegar are to be made, suitable yeast should be obtained. To the crushed fruit add one cake of compressed yeast to three gallons of crushed fruit. The yeast must be broken up thoroughly. Mix yeast with a little water and then stir into fruit. Crushed fruits should be allowed to ferment about a week. During fermentation the fruit should be stirred frequently, and should be screened or covered with a cloth to keep out vinegar flies. The fruits are then pressed and the juice allowed to ferment until all sugar is destroyed. A temperature of about 80 to 90 degrees Fahrenheit is the most favorable.

If only a small amount of crushed fruit has been fermented, it may be pressed through a cheese-cloth. The pressed juice should be placed in clean containers. Alcoholic fermentation will continue for several days after pressing. When alcoholic fermentation is over the yeast, coarse fruit, pulp, etc., will settle out. When this has occurred the fermented liquid should be drawn or poured off the sediment as this material affects the flavor of the vinegar. Usually settling will have taken place in a month

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A. E. Pitt, 12 Western Market, Melbourne.  
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G. Woolf & Sons, 3 Western Market, Melb.  
W. S. Tong, 4 Western Market, Melbourne.  
Silk Bros., 441 Flinders Lane, Melbourne.  
J. G. Mumford, 449 Flinders Lane, Melb.

J. W. Ross, 6 Western Market, Melbourne.  
W. Sweeney, 14 Western Market, Melb.  
J. H. Young & Co. Pty. Ltd., 7 Western Market, Melbourne.

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P. A. Patrikeos, 31 William Street, Melb.

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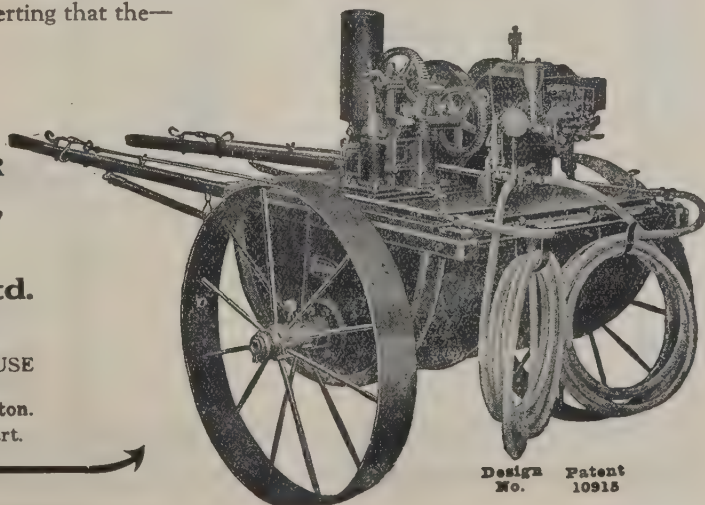
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Design  
No. Patent  
10918



after the start of alcoholic fermentation or within two weeks after alcoholic fermentation is over. A hose is used to syphon off settled fermented liquids from barrels; the liquid may simply be poured from a crock or jar into a similar clean container.

When alcoholic fermentation is complete, not before, vinegar fermentation should be started by the addition of a small amount of vinegar.

#### APPLE LOGIC.

After goin' through some of them Western Slope Apple orchards I've quit worryin' over why Adam ate Eve's Apple. It just goes to show that the snake which tempted Eve was up on what them highbrows nowadays calls psychology. I reckon there was plenty of other fruits and vegetables in the Garden of Eden, such as tomatoes, Plums and Grapes, and no market for any of it, but the snake picked on a big, red, juicy Apple and dangled it before Eve's eyes and she fell and ate thereof and she gave Adam the core and he ate what was left thereof, and that's how this world got off the track.

They is only one way of bringin' back Paradise and that is to try the rule that's used by them old time homopathic doctors. We used to have one of them for our family, all except my Dad. Dad said homopaths was good for children, but they didn't prescribe big enough doses for a full grown man. He didn't say doses of what.

Anyhow, them homopaths believes that diseases is cured by administerin' the same pizen which caused them. On that theory, if eatin' Apples caused the fall of man, eatin' more Apples ought to restore him to his original angel condition. This here may not be approved by the preachers, but it won't do no harm to try, because all other remedies seems to fail.

So I'm advocatin' as a universal cure for indigestion, under-nourishment, over-weight, lack of vitamins, grouchingness, either plain or purile, rheumatism, human foot-and-mouth, super-persnicketyness and all other ills that flesh is heir to, Apple eatin'. Like the old woman in the black alpaca dress said: "If an Apple a day keeps the doctor away, what will two Apples do?"—"Farmer Putnam's Philosophy." (From the news sheet of Colorado Agricultural College).

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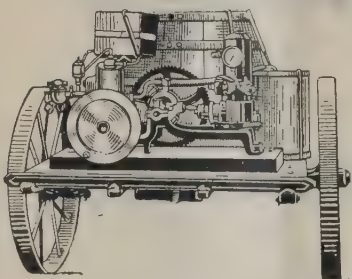
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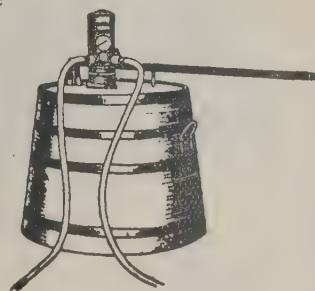
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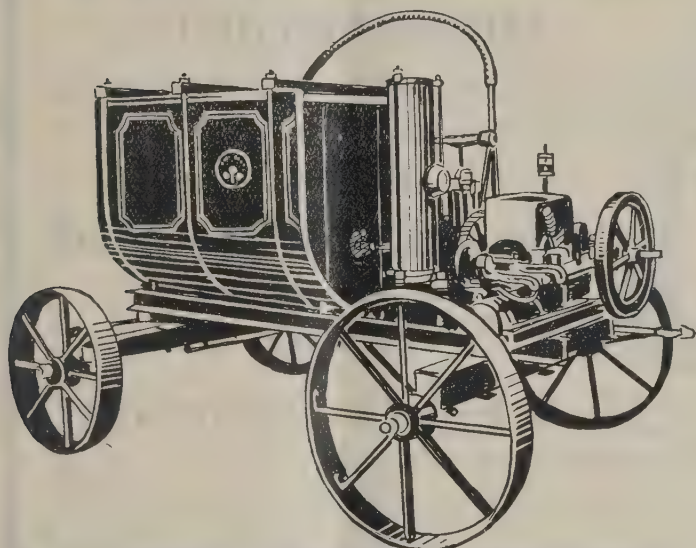
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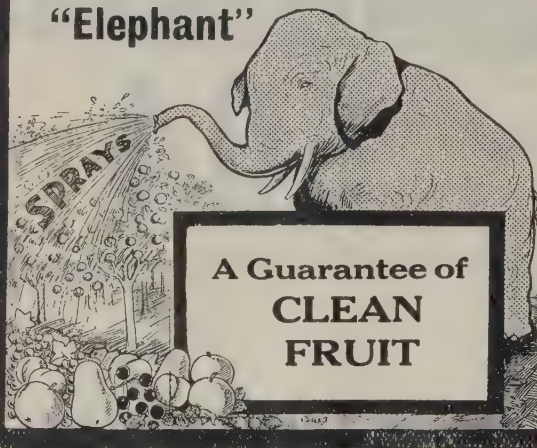
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# "FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of each Month

Editorial and Management Sections.

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## FRUIT PACKING.

### Progress in Victoria.

Recognising the value of good grading and packing of fruit, the Victorian Department of Agriculture some two years ago appointed Mr. Basil Krone as Government Fruit Packing Instructor, so that he could concentrate the whole of his time upon improving the grading and packing of Victorian fruit.

Since his appointment, Mr. Krone has done very good work, and his services are greatly sought after by fruitgrowers, and it has been found that he has been unable to comply with the many demands of growers. Recognising the importance of improved grading and packing, the Government has recently appointed another fruit packer in the person of Mr. J. H. Gregory, who, with Mr. Krone, is devoting his time in conducting packing classes of school children and adults in the approved method of grading and packing in the various fruit districts.

Prior to joining the staff of the Department of Agriculture, Mr. Gregory was in charge of the Somerville packing shed, where he performed good work. Mr. Gregory is of good personality and an expert in the art of packing, and his appointment to the position he now occupies has been welcomed by all growers who are acquainted with him.

The Department deserves much credit for the steps it has taken in bringing about an improvement in the packing of fruit.

## GOVERNMENT IN BUSINESS.

### Opposition in U.S.A.

"The functions of government are politic and not economic," is the principle recently laid down in Washington by a conference of more than 100 trade associations. State, county and municipal authorities who "enter into competition with private initiative for the sake of political expediency or sheer extension of bureaucracy" will also feel effects of the campaign which this conference will wage, beginning in the present session of Congress.

The Conference formally asked that Government, whether municipal, county, State or Federal, abstain from business in which citizens "may properly and legitimately engage." Every group of those who conduct or serve industry were urged to adopt this policy "as effecting their particular vocations and to join in co-operation among the several groups to establish and maintain it."

The Conference outlined plans:

To disseminate among the people correct information as to the extent, cost and results of Governmental enterprises.

To urge that in all Government operations there be established a recognised and adequate system of cost accounting; and that all existing prohibitions against rewarding labor on merit and efficiency be abandoned.

To inform the people that Government in business means the establishment of a socialistic State and the ultimate destruction of all individual opportunity.

To oppose every existing or proposed intrusion by Government into the proper field of private enterprise.

## APPLE WEEK IN CANADA.

### A National Enterprise.

#### Some Big Figures.

In an address in connection with National Apple Week, held in Canada, the week of November 2, Mr. G. E. McIntosh, Canadian Government Fruit Commissioner, said in part: "The outstanding commercial fruit of Canada is the Apple, which has secured high honors in many international competitions. At the Imperial Apple Show, held in England, 1922-3-4, Canadian Apples won 49 prizes, and in 1923 and 1924 the Canadian-grown McIntosh Red was judged the best dessert Apple in the British Empire.

"The Apple may be grown successfully in commercial quantities over an immense area of Canada, so great in fact that if it were planted to Apple trees the product would be sufficient to supply the markets of the world. The crop of Apples to be harvested this year is estimated at approximately 12,000,000 boxes, and the extent of the industry may be gathered from the following facts:—Over 200,000 acres of land are devoted to the production of Apples; over 20,000 railway cars are required annually to market the commercial crop; an estimated value of £24,000,000 is placed on Canada's Apple orchard; the annual crop contributed directly and indirectly approximately £600,000 to the railway earnings of Canada; and this year's crop of Apples is estimated as liable to return to the growers £1,400,000."—"Fruit, Flower and Vegetable Trades' Journal," England, December, 1925.

**The Arsenic Scare.**—"In that arsenate of lead scare," says "The Fruitman's Guide," New York, "there has been a darnsite more lead in the British head than in the British stomach."

# Pruning Deciduous Fruit Trees.

## Scientific and Practical Hints.

The Relation of Pruning to Other Orchard Practice.

Australian and American Experiences Compared.

**J**UNE is the month for pruning deciduous fruit trees. The subject is of wide importance, and there are many diverse opinions.

In order that the subject may be viewed from another angle we are publishing herewith some helpful hints extracted by Mr. J. H. Lang, of Harcourt, Victoria, from Bulletin No. 386 of the University of California Agricultural Experiment Station, Berkeley, California, by Warren P. Tufts, on Pruning Bearing Deciduous Fruit Trees, thus:—

Pruning consists of cutting, removing or repressing certain living parts of the tree in order to modify and utilise its natural habits for the purposes of the grower. By pruning, the form of the tree is modified, its bearing regulated and thereby more and better fruit is obtained at less cost and for a longer period than is possible without pruning. The response of a tree to any kind of pruning is such, however, that it is practically impossible to modify its form without at the same time profoundly influencing its functions. There must be understood the various operations of pruning and how to apply these

pruning, certain facts should be known concerning the annual cycle of growth and development of the tree.

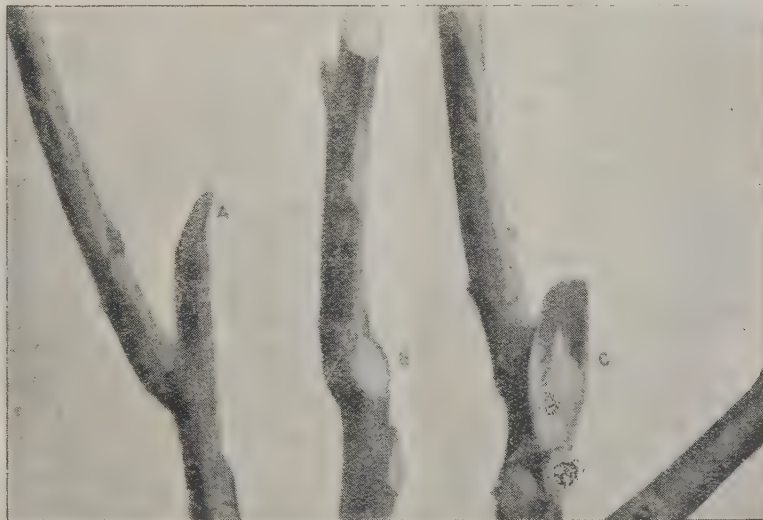
The first growth of the season (blossoms, leaves, and new shoots) is made largely at the expense of plant food reserves normally stored in the tree during the preceding summer and autumn. These stored foods are thus at least partially used up during the early part of the summer. The soil solution containing mineral nutrients taken up by the roots is transported to the leaves where, with other substances built from the carbon dioxide of the air, the complex plant foods are elaborated. These foods are then carried to other parts of the tree for use or storage.

After the active vegetative period of early summer is past, the plant begins to store such elaborated foods as are not used in the maturing of the current fruit crop, development of leaves, the extension of the top and roots, and the development of fruit-buds for the succeeding year's crop. Under favorable conditions, the storage of reserves for the winter months and for the growth of the following year becomes greater and greater as the sea-



(a) Section begun too far below the bud weakens the shoot arising therefrom;  
(b) A possible result.

*Illustrations from Fruit Tree and Grape Vine Pruning, by O. G. Quinn, Sth. Aust.*



This picture shows improper sections. (a) Cut too far above the bud;  
(b) How to remedy the defect. (c) Evil effects of neglecting (b).

operations to obtain the responses which are necessary.

Briefly stated, the chief purposes of pruning are:

1. To produce a vigorous, mechanically strong, healthy tree.
2. To secure a tree well shaped for convenience and economy in orchard management.
3. To distribute the fruiting area well over the tree.
4. To secure fruit of good size and quality.
5. To regulate the annual succession of crops in order to obtain the maximum average crop compatible with good fruit.

The present discussion will be limited largely to a consideration of the pruning of bearing trees.

### The Source of Materials for Tree and Crop.

In order to comprehend the responses of the plant to

son advances, at least until near the time of leaf fall.

A fruit tree with the crops it produces represents an accumulation of materials drawn from the soil by the roots and from the air by the leaves. When the materials from either source can no longer be obtained, it ceases to exist as a living thing. Since this is so, any plan of developing and managing an orchard from the time it is planted to the time it is no longer profitable, must take into consideration the treatment of the soil, and the treatment of the top, especially pruning.

Trees develop or produce very differently in different locations, and respond rather readily to cultural practices. This being true, it is necessary to know what influence a change in the quantities and kinds of material available in the soil may have on the appearance and be-



havior of the top, especially in relation to materials already in the top, or to those being brought in by the leaves. Or from the other point of view—just what influence pruning, spraying, insect infestation, or any other factor may exert in changing the material income of the top, and its relation to the materials derived from the soil, and the subsequent development of the top? Only by such a consideration of orchard problems can they finally be worked out with certainty.

The full solution of this problem will require time and labor, but some progress has been made, and it seems possible to give the orchardist a working insight into the problem at the present time, and to offer suggestions, as to the character of pruning and of the supplementary soil treatments that should be applied under varying conditions of growth and bearing.

There is much observational evidence and no small amount of direct experimentation to show that plants respond very differently in growth and fruit production, according to the amounts of nitrogen available, the amounts of carbohydrates that can be manufactured, and the manner in which these are combined within the plant.

Very great differences likewise may be brought about by variations in temperature and the length of the light period to which plants are exposed. Plants growing out-of-doors, supplied with sufficient moisture and subjected to the usual range of conditions will vary in development and productivity according to the amounts of nitrogenous materials available in the soil and to the amounts of available carbohydrates manufactured by the leaves or stored in the plants.

It is possible to distinguish

#### four general classes

or states of vegetativeness and fruitfulness of the plant in this respect.

1. Mineral nutrients including nitrates abundant but no available carbohydrate supply. Result: vegetativeness weak and plants non-fruitful.

2. Mineral nutrients including nitrates abundant and a carbohydrate supply available. Result: vegetativeness strong but little or no fruit.

3. Mineral nutrients including nitrates relatively less than in class 2. This reduces vegetativeness and leads to an accumulation of carbohydrates. Result: fruitfulness.

4. Mineral nutrients including nitrates even relatively less than in class 3. Result: this leads to a marked accumulation of carbohydrates and a suppression of both vegetativeness and fruitfulness.

Naturally these classes grade into one another, but it is possible to place trees in one or another of them with a considerable degree of accuracy, by observing the appearance and performance of the trees and knowing the general cultural conditions which have been employed.

For the fruitgrower, it is obviously impracticable to attempt an actual analysis of the trees in an orchard to determine their chemical content and therefore the treatment as to pruning, irrigation, fertilisation, and other cultural practices, which should be given. But, as indicated above, the crops produced and the new wood growth made, generally furnish an excellent basis for judgment and fairly accurate decision as to what is happening in the plant. The author has attempted to cite below some points to be kept in mind in connection with the foregoing suggestions and instances in which fruit trees apparently fall in one or another of the above outlined classes.

It has been demonstrated many times that heavy cutting, whether done on young trees or old, generally results in rank vegetative growth, and, if the trees are of bearing age, in reduction of fruitfulness. However, if in addition to the pruning, the trees are heavily fertilised

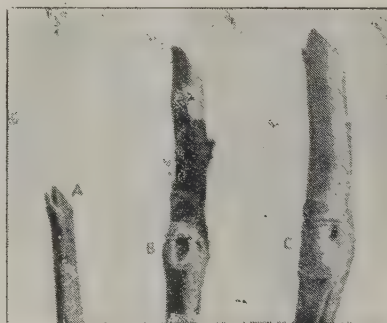
and irrigated, the new growth will be still ranker and more succulent, and little or no fruit will be produced.

On the other hand, no pruning, insufficient soil moisture and few available mineral nutrients will result in scanty new wood growth and, in bearing trees, a tendency towards over-production. If this latter treatment is continued trees soon reach a condition where there is neither wood nor fruit produced. Between these extremes may be found all gradations of vegetativeness and reproductiveness, depending upon the environment under which the plants are growing.

Fruitgrowers will readily call to mind orchards exhibiting varying degrees of vegetative vigor and fruitfulness. Unfortunately, many attempts in the past have been made to influence the wood growth and the productiveness of the tree by pruning alone. This is a mistake, since pruning is only one of the factors which modify plant growth and productiveness.

Cultivation, irrigation, and application of fertilisers are some of the other factors which must be considered along with pruning in attempting to regulate the vegetative growth and fruitfulness of an orchard.

Trees just planted have relatively little carbohydrate, but enough to start them into growth. As they develop, leaves are formed which manufacture a new supply of carbohydrates; and as the leaf area becomes greater this supply is increased, the roots are extended further into the soil, and the tree becomes vigorously vegetative, that is, it belongs to class 2.



This picture shows—(a) Desirable Position for Section; (b) and (c) Subsequent rapid healing of wound.

If, however, such young trees, or even older ones, are severely summer pruned so that the leaf area is seriously reduced, the food stored in the branches will be consequently removed, and the tree as a whole will fail to make as much growth as one less severely pruned, other conditions being the same. This would represent a class 1 condition.

On the other hand, if the young vigorous trees are not so severely cut back, the consequent larger leaf area will permit of a greater manufacture of carbohydrates, and provided the nitrogen supply is not markedly increased, there will be a tendency toward a decrease of vegetative activities, an increase in carbohydrate accumulation and the trees will become fruitful. Such plants are in class 3. It is the ultimate aim of every commercial orchardist, to maintain his trees in this class and his main efforts in the way of cultivation, irrigation, pruning, and other cultural practices should be performed with the idea of securing a proper balance between vegetative growth and fruitfulness. The production of a large number of fruits is not profitable, unless it can be continued and for this a constant supply of new growth must

be maintained as well. By knowing some of the materials concerned in the maintenance of this condition, and some of the means for their regulation, the fruitgrower has a direct and fairly accurate method for securing the type of tree he desires.

The conditions of class 4 are commonly observed in old Prune and Pear orchards in California, which make little or no new growth and, although there is present a great number of fruit-spurs, little or no fruit is produced.

In these cases the difficulty is frequently one of lack of nitrogen, because there is an accumulation of large quantities of carbohydrates stored in the top. Such trees as these when nitrogen and moisture are supplied, or if there is available nitrogen already in the soil, when moisture alone is applied, frequently are unusually productive for a year or two. Likewise, a pruning which removes much of the old wood and permits a relatively greater nitrogen supply to the branches and buds remaining results in a greatly increased vegetativeness of the remaining portions, often accompanied by abundant fruit production as well.

But to attempt to regulate such trees by pruning alone would be futile, because to balance the top with the available nitrogen or moisture, would mean reducing the top to a size where it could hardly produce a commercial crop. It would be far more profitable to give the proper attention to soil requirements, as well as to a more rational pruning method.

#### Correlation Between Pruning and other Cultural Practices.

The above considerations emphasise the fact that pruning alone cannot be relied upon to regulate the growth and productivity of the orchard. It is doubtless one of the most important factors in determining the balance between carbohydrate and nitrogen supply, but a thorough understanding of the principles involved must be obtained before a rational pruning system can be adopted for any particular set of conditions.

There may be an adequate supply of available nitrogen, but if soil moisture is reduced to such an extent that the tree cannot utilise this food material, then the pruning must be such that a proper balance will be maintained. Pruning under such circumstances should probably be considerably heavier in order to reduce the amount of water lost through evaporation, and to maintain a relatively higher proportion of nitrogen to the carbohydrates present or being manufactured, than if there were available an adequate supply of soil moisture and nitrogen.

In the same way, cultivation, irrigation, and fertilisers affect the pruning practice by limiting or increasing the amounts of soil moisture and available minerals, especially nitrogenous compounds.

#### New Wood Necessary for Future Fruitfulness.

As previously suggested, the amount and character of the new wood produced during any season may be taken as an index of the conditions existing within the tree. The amount of new vegetation necessary to maintain the correct balance apparently differs with the species in question. In general, it may be said that those fruits, such as the Peach, which bear the bulk of their crop on one-year wood, associate fruitfulness and a relatively greater amount of new growth than seems necessary with spur producers.

In the case of spur producers, those species which have the longest lived spurs apparently need the least amount of new wood. This seems reasonable, since at least a portion of such new growth must be used for replacement of fruit-wood which has outlived its usefulness. The amount of new growth necessary for continued fruitfulness may vary from a few inches, in the case of such fruits as the Apple and Pear, to from two to four feet in the case of the Peach,

Table 1.

| Fruits.                                               | Desirable Amounts of New Growth for Bearing Trees. |                          |
|-------------------------------------------------------|----------------------------------------------------|--------------------------|
|                                                       | Under 10<br>years of age.                          | Over 10<br>years of age. |
| Peaches . . . . .                                     | 20 to 40 inches                                    | 12 to 30 inches          |
| Apricots . . . . .                                    | 12 to 30 inches                                    | 10 to 24 inches          |
| Plums (excepting Prunes)<br>and Quinces . . . . .     | 10 to 24 inches                                    | 9 to 18 inches           |
| Almonds, Prunes, Apples,<br>Pears, Cherries . . . . . | 9 to 18 inches                                     | 6 to 10 inches           |

#### Bulk Versus Fine Pruning.

The question may well be asked whether or not pruning should consist in a few large or many small cuts distributed well over the tree. Horticulturists are generally of the opinion that the immediate influence of a pruning cut does not extend far from the place it is made and that, therefore, it is desirable to distribute the pruning over as large a portion of the tree as is economically possible. (Of course the total amount of cutting done does eventually produce an influence throughout the tree as a whole.) Whether the cuts should average one-fourth inch, one-half, or one inch in diameter, very largely depends upon the species under consideration. In the case of the Peach, where the bulk of the fruit wood must be renewed annually, many cuts must be made in order to secure a large number of new shoots well distributed. With those species producing on spurs, however, a comparatively few cuts may often suffice.

Bulk pruning by the removal of relatively large limbs commonly gives rise to numerous water-sprouts. These may at times be utilised in rebuilding the framework of the tree and a few of them, under favorable conditions, may be converted into a part of the fruit-spur system. Generally speaking, however, these growths are of little value and should be removed entirely as soon as they appear.

#### Spur Pruning.

Spur pruning is essentially "fine" pruning and is often utilised in the rejuvenation of orchards which, for one reason or another, have fallen into class 4. It consists in the removal of whole spurs or of portions of spurs, and tends to stimulate vegetative growth. On account of the labor cost involved and the fact that most trees are very "brushy," comparable results are usually secured by a somewhat "coarser" method of cutting.

#### Transition From Non-Bearing to Bearing.

The lighter the pruning of young trees, consistent with the securing of a proper framework of scaffold branches, the greater will be their development and the sooner profitable crops will be produced. The more severely young trees are pruned, the longer they remain unfruitful. Continued heavy cutting not only reduces the chances for a fruit crop, especially with spur producers, and very materially reduces wood development, but it also tends to move such trees from class 2 into class 1.

It is a matter of common experience that with fruit trees which are just beginning good production, it is possible by injudicious heavy cutting during one season so to disturb the delicate balance between wood growth and fruiting that profitable cropping is delayed as much as three or four years. The best judgment must always be exercised when determining the pruning treatment to be given any particular orchard; this is especially true when the trees are just approaching the bearing age.

As the trees become older and bearing is fully established, many instances will doubtless arise in which heavier pruning will be necessary in order to continue regular bearing and to maintain the necessary wood growth at the same time. To this end supplementary fertilisation may be advisable or even necessary.



### Promotion of Fruitfulness.

**Distribution of Fruiting Wood.**—Pruning is of value in distributing fruiting wood uniformly throughout the tree, thus securing greater tonnage of better quality. By this means, the trees are kept within bounds and the costs of maintenance and harvesting are reduced.

**Fruit-Bud Formation.**—Sufficient light in all fruit-producing parts of the tree is essential in order to secure a uniform distribution of fruit-buds. Pruning is practically the only means of securing favorable light distribution.

Although fruit-buds for any crop begin their development the previous summer, nevertheless, the pruning of bearing trees at that time is of doubtful value as a means of securing greater fruitfulness.

**Regular Pruning.**—Optimum results are obtained only when the pruning treatment is consistently and regularly carried out over a period of years. It is possible with some species to allow the trees to remain unpruned for several years, but the net returns from such treatment are smaller than those secured from annual cutting which insures a constant renewal of fruiting wood. Pruning should be part of each season's operations even though the amount of wood removed in some instances may be comparatively small.

**New Wood and Size of Fruit.**—There is apparently a direct correlation between new vegetative growth and size of fruit. Trees which make a satisfactory wood growth usually bring the fruit crop through with larger sizes than do those which are unsatisfactory in this respect. It is the common experience of fruitgrowers that relatively young, vigorously growing trees nearly always produce fruit of large size.

### Protection of Pruning Wounds.

If a tree is properly pruned from the start, the removal of large limbs can for the most part be avoided.

All cuts should be made close to the branch from which the limb is taken, leaving no stub. This will greatly facilitate the healing of the wounds.

The treatment of pruning wounds depends largely upon local conditions. In any section, like the Watonsville Apple district, where the foggy climate favors the germination and growth of the fungi which cause wood decay, it is best to disinfect the pruning cuts as soon as the wood has dried a little, but before any cracks have formed. Cyanide of mercury, one part to 1000 parts of water by weight, is a good disinfectant. The solution should not be put into a metal container. Containers made of wood, glass, or enamelware should be used. Cyanide of mercury is a stomach poison and must be handled with care.

In localities where the air is relatively dry, it will ordinarily be unnecessary to disinfect pruning wounds, but in any case large pruning wounds should be covered with some protective substance. This is not to aid the healing, but to prevent the entrance of rot-causing fungi. All wounds an inch and a-half, or more, in diameter should be covered.

The following are three of the best materials for covering wounds:—

White lead paint mixed with raw linseed oil.

Asphaltum, Grade D, which must be heated before applying.

Oronite, which is similar to asphaltum, but which can be applied cold. When too thick, a special non-injurious "oronite thinner" can be added.

### Practical Suggestions.

1. The total amount of new growth which the tree makes, taking into consideration the crop produced and the conditions under which it is grown, is the best criterion by which to judge whether or not the pruning has been of the proper severity.

(a) If the resultant new growth is longer than seems desirable for a tree of the kind and conditions under which it is grown, then the previous pruning was too severe.

(b) If the new growth has been inadequate the cutting was too light and a heavier pruning programme should be adopted, except in those cases where sparse growth has resulted from non-availability of carbohydrates.

2. The pruning should include adequate thinning out of the fruiting shoots, and this should be followed, where necessary, by a thorough thinning of the fruit.

3. The tree should be thinned out sufficiently to admit an adequate light supply.

4. All interfering branches, dead wood, and diseased parts should be removed.

5. The larger limbs should be spaced far enough apart throughout their length so that they will have ample room to develop the desired fruiting branches and spurs.

6. The trees may be kept from becoming too high by regularly cutting back the tallest branches to strong outward growing laterals.

7. All branches should be cut off close to the limb from which they arise, leaving no stubs.

8. It should be emphasised at this point that it is impossible to secure an ideal shape, height, and distribution of fruiting wood unless the trees are spaced far enough apart when planted to enable them to develop normally. There has been a decided tendency among Californian fruitgrowers to plant their trees too close together for normal development.

## Citrus News and Notes.

### Crop Prospects.

### Light Yields Generally Anticipated.

#### NEW SOUTH WALES.

#### Light Crops Expected.

The following is an estimate (on the conservative side) prepared by Mr. W. J. Allen, Fruit Expert, Department of Agriculture, Sydney, regarding the Citrus crop in N.S.W.

| District.                                                  | Approx.<br>No. of cases. |
|------------------------------------------------------------|--------------------------|
| Northumberland . . . . .                                   | 250,000                  |
| Cumberland . . . . .                                       | 150,000                  |
| M.I. Areas . . . . .                                       | 150,000                  |
| North Coast . . . . .                                      | 20,000                   |
| Other Centres . . . . .                                    | 200,000                  |
| There is not a large area under Citrus on the North Coast, |                          |

With the exception of the North Coast, where conditions were much more favorable, the crop of Citrus fruits will be lighter than usual, especially "Valencia Late" variety, which, in many instances, did not blossom last spring owing to adverse conditions, which were almost general. Droughty conditions prevailed until the middle of March, when good soaking rains were received, forcing out the parched and lightly laden trees into a heavy bloom which at present is setting.

Lemon trees are promising a large crop, which should mature next Christmas to Easter, but are carrying very little to no main crop.

## NEW SOUTH WALES' 1926 CITRUS CROP PROSPECTS.

Mr. H. G. Such, Manager, Central Citrus Association (N.S.W.) Co-op. Ltd., Sydney, N.S.W., writes under date 18/5/26, as follows:—

At the present time there appears very little prospect of being able to state accurately what the actual crop is. Estimates from packing houses are not yet available, however, the writer and Mr. MacDermott, of the Gosford Packing House, have recently investigated the position on most of the main Citrus areas in the State, and report that Navels are medium, Mandarins medium, commons light, Valencias medium to good.

The general crop in N.S.W. is estimated at 2½ million bushels in 1925, and due to the entry this season for the first time of a large number of orchards into bearing stage, it would appear that there is not much prospect of any material reduction.

The quality of the fruit is rather higher than last year, when such a large proportion was undersized, diseased or in some way affected as to reduce its value. It would appear, therefore, that there will be as much good fruit available in the coming season as in that just passed.

Lemons inland, are good. On the coast and other districts light to medium.

The Citrus packing houses in the State are now making preparations to open their season. Already on the Murrumbidgee irrigation area the first shipments have been made.

Improvements and extensions in plant are being made by several houses, notably Wyong, who are replacing manual labor by a motor and remodelling their plant by new sorting tables and feeding arrangements, which are expected to considerably reduce the cost of handling. At Gosford, cleaning and brushing machines are being installed, these being specially imported from America. At Central Mangrove Packing House, power is being installed, and also cleaning and brushing machines.

In order to obtain the full advertising value of the packs, N.S.W. packing houses are making arrangements to wrap their Oranges this season in advertising wraps, which should have the effect of materially improving the demand of these standardised lines.

## CITRUS CROP ON THE GRIFFITH IRRIGATION AREA.

The Griffith Producers' Co-operative Co. Ltd., Griffith, N.S.W., report under date 14/5/26, as follows:—

With approximately 60 per cent. of the growers' estimates to hand, it appears that the crop of both Washington Navels and Valencias is about 20 per cent less than last season. The total crop of each of these varieties is not expected to exceed 25,000 bushels.

The Lemon crop may run to 6,000 bushels as compared with 10,000 bushels last season. With this crop much depends on the winter weather. Should heavy frosts occur in June the growth of the fruit will be checked, with a consequent lowering of the yield.

The Griffith Producers' Company, which packs and markets over 80 per cent. of the area Citrus under the "Excello" label, will this season pack the well known brand in a printed wrap.

## SOUTH AUSTRALIA.

Report by Mr. G. Quinn, Government Horticultural Instructor.

The Citrus crop here promises to be about an average one. Statistically about 50,000 bushels of lemons and 320,000 bushels of Oranges are recorded as an annual average for recent years.

In the inland, purely irrigated districts the crop is recorded as only fair in quantity, but the plantations in the coastal zones are better, and in many Orangeries may be classed as good. The young normal crop fruits are making good progress since the April rains, though many prematurely colored small Oranges are seen in some plantations where the soil became too dry in the six months' spell of rainless weather through which we passed.

## MURRAY CITRUS CROP.

J. A. Parkes, Secretary, Murray Citrus-growers' Co-op. Association Ltd., Adelaide, writes:—The Citrus crop throughout our river districts this year promises to be an average one. After two lean years (1923 and 1924), when the yield was considerably below normal, there was a distinct increase in 1925, 110,000 cases being marketed through Association channels, compared with approximately 80,000 cases for each of the previous two years.

Although the prospects for 1926 are not quite so bright, it is anticipated that the yield will be within 10 per cent. of last year's. The groves, generally speaking, are looking remarkably well, in fact, better than they have done for several years.

## VICTORIAN CITRUS CROP.

### Lighter Than Last Year.

The Citrus crop is lighter than last year, especially as regards Valencia Late, states Mr. J. M. Ward, Superintendent of Horticulture in Victoria. Washington Navel and seed types are probably about 10 per cent. lighter than last year, while Valencia are probably 20 per cent. lighter. Most districts show this shortage. The quality of fruit is good in all districts.

Swan Hill.—Mr. A. Luke, Hon. Secretary of the Swan Hill district Citrus Growers' Association, reports that the local Citrus crop is light.

### Kyabram.

Mr. F. J. Churches, Secretary Kyabram Citrus Association, reports under date, 11/5/26:—

The Citrus crop in the Kyabram district is medium to heavy: where groves are receiving proper care, there are heavier crops than last year.

The manuring of Orange groves is the rule hereabouts, with marked beneficial results. I have just visited an Orange grove of 5 years old trees of magnificent growth, and carrying 2 cases of Oranges per tree.

## INCOME TAXITIS.

They have their troubles in U.S.A., too. Citrus Sam, writing in "Citrus Leaves" (California) for March, 1926, says:—"Income taxitis will no doubt be a new brand of insanity unless the next generation comes into power with several new senses developed. A Sales Tax is painless, but effective.

"They've taxed my barn and citrus trees,

My house and mongrel dog,  
The honey made by busy bees,

And every horse and hog;  
They've levied taxes on my car,

My stocks and long-eared hare,  
And soon they'll put assessments  
On each breath of God's free air."



# Tasmania.

Export and Local Markets ∴ Seasonable Cultural Notes.  
Advisory Board Meeting.

(By Our Correspondent)

## TASMANIAN FRUIT INDUSTRY.

### 1924-25 Report.

The report of the Tasmanian Agricultural and Stock Department for 1924-25, in its notes on the fruit industry, stated that prices secured in England for the last season's shipments of Apples and Pears assumed a pre-war basis, and further expansion would probably ensue.

It is estimated, the report states, that the production amounted to 2,100,000 cases of Apples, or, roundly, a 60 per cent. yield of the normal quantity grown here. Shipments of Apples beyond Australia totalled 1,224,225 cases, and, approximately, £400,000 sterling will be added to the pockets of growers and others speculating in this fruit.

Results of experiments conducted by the Fruit Division for the suppression of black spot fungus have been brought before orchardists, as has also a system of manuring calculated to restore and maintain the fertility of the mudstone areas in which the majority of our southern orchards are planted.

The State Fruit Advisory Board, the members of which also constitute the Board under "The Apples and Pears Act," have given every consideration to the fruitgrowers' interests.

### Overseas Fruit Shipments.

Mr. P. H. Thomas, Tasmanian Government Fruit Expert, writing on May 12, said:—

At the present moment the whole industry is concerned with the unfortunate position that has suddenly arisen in regard to our overseas fruit shipments by reason of the general strike, which is now in progress in the United Kingdom.

Whatever happens, one can only view the results as being disastrous to the fruitgrowers.

Very little information is yet forthcoming as to the fate of the fruit which has arrived since the beginning of the strike, except that largely through the representations of the National Fruit Federation, the British Government have proclaimed Apples a "food" under the emergency regulations.

A total of approximately 1,855,584 cases of fruit has now left the State for "overseas" ports this season. This is a record for the State, being nearly a quarter of a million cases in excess of the 1923 season.

Of the total, 1,430,984 cases have been despatched from Hobart, and 334,600 cases from Beauty Point.

The largest shipment to leave the State in one vessel was made by the s.s. "Port Adelaide," which loaded 101,388 cases from Hobart, and 36,259 cases from Beauty Point.

Consignments will be better distributed than in former years, and fruit will be received direct at the Ports of London, Liverpool, Manchester, Hull, Southampton, Bristol, and Glasgow.

A fair proportion of consignments is also forwarded for transshipment to Hamburg, Copenhagen, Antwerp, and other continental ports.

At the time of writing it is impossible to forecast just what the results of the strike will mean to the fruitgrower. The State Fruit Advisory Board at once took action in the matter when the news was just received, and have approached the Prime Minister with a definite request that control of all Australian fruit shipments be established, whereby the British Government takes over the fruit at the cost of production and transport, either separately or conjointly with the Federal Government. If this is effected it would at least guarantee costs to the producer and prevent the chaos and losses that must result if the accumulated shipments are allowed to glut the market.

## ORCHARD NOTES.

(By P. H. Thomas, State Fruit Expert.)

### Pruning.—June.

In many cases this operation is left until late in the dormant season, resulting in the work being hurried, and insufficient time left before growth commences to carry it out satisfactorily.

It is advisable to commence pruning this month, beginning with stone fruits and varieties that lose their

foliage early in the autumn. This will allow careful attention being paid to the spur pruning which is so essential in bearing trees if regular crops of good quality fruit are to be produced.

When thinning bud clusters the object should be to eliminate all diseased, barren, and unhealthy spurs, leaving sufficient of the healthy groups properly spaced along the limbs. If this is attended to each season the trees can be easily maintained in a satisfactory condition, but if neglected for two or three years the work soon becomes a difficult and tiresome operation.

Each year the fruitgrower is also often faced with the necessity of removing certain limbs or portions of the tree for some cause or other. Unfortunately this operation is often carried out in an unsatisfactory manner, the wound being left rough and exposed to the attacks of fungus. The work should be performed with a pruning saw, the cut surfaces being trimmed smooth with a knife and covered with a fungicidal paint such as white zinc or creosote.

### Drainage.

Areas situated upon fairly level ground and subject to the influence of the winter rains will benefit by the use of water furrows to carry off any surface accumulation of water. These should be run in the form of single plough furrows between the centre of the trees and intersecting at right angles. By this method even the wettest areas can be kept in a much better condition during the winter. The treatment must only be considered as supplemental to underground drainage, and will not correct conditions due to soakage or underground seepage, for which a proper system of tile or stone drains should be installed.

### Lime.

Lime is one of the most important elements necessary to plant life, and is generally deficient in most Tasmanian orchard soils. Applications of lime will be of great benefit to the orchard soil under conditions such as marked acidity, or a stiff clayish texture. Lime will also, by chemical action, release and make available the different plant foods which may be present in an unassimilable condition.

Application should now be made at the rate of from 10 cwt. to one ton per acre, the lime being scattered on the surface by means of a "spreader" and ploughed under. Either "roche" or "slaked" lime may be used, but the former, though more expensive, is desirable, especially where the soil texture is to be improved.

**General.**

During this month the orchardist should take the opportunity of overhauling the spray pump, ploughs, discs and other cultural implements that are not in use, so that they will be in readiness for the coming season. It is also a good plan at this period to thoroughly inspect wire-netting fences in rabbit-infested districts, so as to safeguard the trees from their entry and damage being effected during the winter months.

Side lines and headlands can be cleared of any rubbish or scrub that is growing which may form a harbor for pests, and a general clearance effected of those items that have had to be postponed during the busy periods.

**STATE FRUIT ADVISORY BOARD.**

A meeting of the State Fruit Advisory Board was held at the Department of Agriculture on May 11, 1926.

There were present:—Messrs. Neil Campbell, M.H.A. (Chairman), J. P. Piggott, M.H.A., Sir Henry Jones, A. E. Webb, W. H. Calvert, F. Cole, B. J. Pearsall, V. J. Skinner, H. W. Hamilton, J. H. Astell, A. Davies and the Secretary, P. H. Thomas.

**Overseas Fruit Exports, 1926.**—The Chairman addressed members, detailing the events leading up to the meeting and instancing the unfortunate position of fruitgrowers and shippers in respect to consignments that had been forwarded to the United Kingdom, owing to the general strike which was in progress.

Sir Henry Jones explained to members the action which had been taken by a committee representing shippers and executive of the Board which met on Friday, May 7, the following resolution being carried:—

"That this meeting of the State Fruit Advisory Board of Tasmania resolves that the Federal Government be urged to immediately communicate with the British Government with the object of arranging for the British Government, separately or conjointly with the Federal Government, to take over the whole of the fruit shipments now in the United Kingdom and to arrive there from Australia, for the 1926 season, at the cost of production and transport, in order to prevent the incalculable damage that will otherwise be done to the fruitgrowers of Tasmania and to Australia as a whole through the disorganization that has been thrown upon their perishable, and limited season of fruit trade by the cessation of work in England."

On the motion of Sir Henry Jones and Mr. V. J. Skinner, it was resolved:—"That this full meeting of

the Advisory Board fully endorses the action of the Executive in respect to the suggested control of this season's overseas fruit shipments." The following amendment, by Messrs. Webb and Astell, having been put and lost:—"That the Commonwealth Government be requested to initiate a scheme of insurance in regard to the whole of the Australian fruit shipments, whereby the growers and shippers contribute an amount of 6d. per case to ensure that the fruit is not sold below the cost of production."

It was further decided that the Secretary forward telegrams to the other Apple exporting States, explaining the suggestions put forward by the Board for the control of this season's overseas fruit shipments.

Following a discussion on the advisability of continuing overseas shipments, it was resolved on the motion of Mr. Calvert and Sir Henry Jones, "That this Board advises growers and shippers not to forward any more fruit for shipment to overseas markets after this date.

On the motion of Messrs. Hamilton

**DRIED FRUITS—SALES IN LONDON.**

In a cable to the Chairman of the Dried Fruits Control Board (Mr. W. C. F. Thomas), the London Agency of the Board stated that the following sales of dried fruits have been recorded with the Agency for the period from April 24 to May 1, 1926:—

**Sultanas—**

Sultanas.—12,804 tons, at an average price of £68/3/- per ton.

Currants.—6,215 tons, at an average price of £31 per ton.

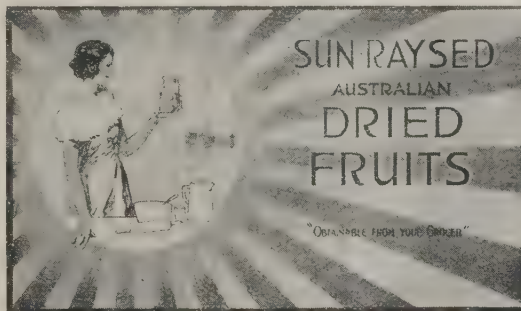
Lexias.—3,180 tons, at an average price of £32 per ton.

**AUSTRALIAN SALES, 1926 SEASON'S FRUIT TO 30th APRIL.**

|                    |          |
|--------------------|----------|
| Currants . . . . . | 363 tons |
| Sultanas . . . . . | 718 "    |
| Lexias . . . . .   | 63 "     |

**OBITUARY.**

We learn with regret that Mr. G. W. Lewis, Kookaburra Packing Shed, Nyah, was accidentally killed on Saturday, 8th May. He was attempting to start a heavy oil engine, which backfired and fractured his skull.



Showcard being displayed by New South Wales Trams free of cost.

and Skinner, it was decided that a deputation of three representatives from the Board be sent to Melbourne for the purpose of placing before the Prime Minister the suggestions of the Board for meeting the present crisis in respect to overseas fruit consignments, the Chairman, Sir Henry Jones, Messrs. A. Davies and J. P. Piggott, M.H.A., being appointed to comprise the delegation.

**Sydney Committee of Agents.**

On the motion of Messrs. Calvert and Skinner, it was decided "That the Board recommend that the Committee be limited to 25 agents."

A further motion by Messrs. Piggott and Hamilton decided:—"That the matter of the six additional appointments to the Committee be proceeded with forthwith and that a member of the delegation proceed to Sydney to interview the Committee and report to the Board as to their recommendations in this respect."

**APRICOT PRICES.**

On April 19 the prices of all grades of dried Apricots were advanced 1d. per lb.

This rise applies to all unsold stocks in both agents' and merchants' hands, and as soon as the advance in price has been collected it will be distributed to agents, who in turn will pass same on to their growers.—"Dried Fruits News."

**GREEK CURRANT CROP.**

Greece's currant crop for 1925-26 is estimated at 296,800,000 lbs., a decrease of 12 per cent. from the previous year's production. There was a 337,000,000 lb. carry over from 1924-25. A guaranteed price of £13/12/- per short ton is made for any of this year's carry over by the Central Currant Office.



# Victorian Fruitgrowers' Convention.

Successful Gathering at Portland.

New Organisation Launched.

THE THIRTIETH ANNUAL CONVENTION of the Victorian Fruitgrowers' Central Association was held at Portland from May 19 to 21, when delegates from all over Victoria took part in the deliberations, and resolutions of vital importance to the future of the industry were discussed. After a welcome had been extended to the delegates by the Mayor of Portland (Cr. Wyatt), the minutes of the previous conference were approved, and the annual report presented by the President (Mr. Geo. Mock). Sympathetic reference was made to the loss by death during the year of Mr. H. H. Hatfield and Mr. Robert Mair, and a resolution was passed by members standing, regretting their loss and recording appreciation of their services to the industry.

Referring to the proposed trial shipment of fruit to China, which the Government had agreed to subsidise, Mr. J. H. Lang (Harcourt) reported that the Committee appointed to deal with the matter had consulted Mr. Louey Pang, who advised deferring the shipment until the political situation in China was more settled. Mr. Pang was now in China, and had promised to cable his firm in Melbourne when a suitable time arrived for despatching the fruit, and he would supervise its disposal in China. On the motion of the Chairman the report was adopted.

Apologies were received from the Minister for Agriculture, Mr. J. W. Bailey (Executive), Mr. Aspinall, Mr. Russell (Fruit Exporters' Handling Committee), and Mr. P. T. Young.

The Hon. A. S. Rodgers, M.H.R. for Wannon, in formally opening the convention, said he was very glad to renew acquaintance with members of the great Australian fruit family. Thinking what three generations of people had done in Australia, he found it impossible to become a member of any "stinking fish" party. No one could solve the fruitgrowers' problems half as well as they could themselves. Australia produced some of the finest flavored fruit in the world—that was one of her natural advantages; but one of the disadvantages was the distance from the world's markets, and the lack of population in Australia for a home market. He would favor

the subsidising of the transport of fruit in order to place it on the world's markets cheaply rather than the present system of direct subsidy. Another drawback was the lack of continuity of supplies. The Australian Fruit Council had been established to give the growers a voice in the export regulations that governed the marketing of their produce. He advised growers not to spoil their reputation in the world's markets by sending anything but the best.

Messrs. Bond and Everard, members of the State Legislative, in wishing the convention success, emphasised the need for unity and the development of local markets.

## Cool Storage and Research.

Mr. F. Thomas (Bunyip) said that the Institute of Science and Industry was doing fine work and carrying out investigations which it was impossible for growers to conduct in orchards and cool stores. He moved—

"That this convention congratulates the Federal Ministry upon its decision, to set aside £100,000 to reorganise the Institute of Science and Industry, and urges the need of the scientific examination of the problems relating to the cool storage of fruit and the control of insect pests and fungus diseases."

The motion was seconded by Mr. R. M. Pinlay (Cool Stores Association). Mr. B. S. B. Cook, speaking on behalf of the Citrus Association, said some investigation had been made in regard to cool storage of Citrus, but it did not go far enough, and suggested adding to the resolution the words, and overseas transport of same," after "problems relating to the cool storage of fruit." The suggestion was agreed to by the mover and seconder, and the motion carried unanimously.

On the motion of Mr. J. H. Lang and Mr. A. Lenne, supported by the Superintendent of Horticulture (Mr. J. M. Ward), it was agreed—

"That the Federal Ministry be urged to establish a plant quarantine station, through which new and valuable varieties of plants and fruits can be imported in quarantine for distribution when proved clean."

"That this convention requests the State Ministry to strengthen

its entomological department and carry out research work to discover the best means to combat the various orchard pests, and that sufficient funds be made available to obtain practical results."

## Railway Matters.

During the afternoon, Mr. J. H. Olsson, representing the Railways Commissioners, attended, when matters referring to the railways were discussed.

Mr. A. McCully (Silvan) suggested that the Railways Commissioners be asked to place on all country passenger trains a louvre truck for the carriage of fresh fruit, beginning about the end of November.

The motion was seconded by Mr. F. J. Wynne (Diamond Creek), who suggested that ice trucks should be supplied.

Mr. Thomas (Bunyip) asked when the responsibility of the railways in respect of fruit commenced—when they accepted the consignment note or when they loaded the fruit, if loading was done by railway officials?

Mr. F. J. Churches (Kyabram) said he had no difficulty, as he always carried a book of consignment notes, used a carbon and kept the duplicate receipt.

Other questions were asked about responsibility for loading, and Mr. Olsson, in reply, said that the Claims Prevention Board met every month to deal with matters of mutual interest to the public and the railways. In regard to louvre trucks, fruit was forwarded in these whenever possible, but owing to the fact that fruit was often forwarded in small lots, and the number of trucks limited, this could not always be done. It was proposed to increase the number of trucks in the near future. In any case the fruit was marked with a "perishable" card, which meant it must be given the quickest despatch. Ice trucks were used for certain classes of produce, but possibly fruit might be adversely affected if carried in ice trucks and afterwards exposed to the influences of the weather. The Department endeavored to carry fruit promptly and accurately. If it were properly addressed and consigned, and did not reach its destination, the Department was responsible. With single case lots, if the consignment note was lodged with the station-master or his deputy, the Department carried the responsibility. Regarding late loading, the Department laid down certain times at which fruit should be loaded in order to be forwarded by a specified train. In the best interests of the community, it was desirable that these conditions

should be observed. If the consignor brought his fruit to the station after the proper time, and the station-master accepted it, the chances were that the train would be delayed, and all the passengers affected. The rail-staffs, if they had the interests of the customer at heart, and could see their way clear to accepting a fruit consignment after hours without causing delay to the train, would be perfectly justified in accepting it.

In the case of general loading, it was very difficult for the Department to give an exact receipt, but it was prepared to do the loading if the grower was willing to pay for it, in which case a full receipt would be given and the Department would be responsible. Where fruit is forwarded in anything less than truck loads, the case should be branded. A stencil should be sufficient, provided the brand was known. In regard to the designation for stations in Victoria and New South Wales having similar names, Mr. Olsson promised to take the matter up with the other Departments in order that there might be no two alike.

It was impracticable for the Department to weigh all fruit despatched. Therefore, the average weight of fruit in standard bushel cases had been determined, but in some instances it had been found that the cases were much heavier than the standard and that the measurements were greater than those specified in the Fruit Act.

**A Voice.**—That is unusual. (Laughter.)

Mr. Olsson said the Department was anxious to strike an average that was suitable to everyone. Considerable undercharging had resulted. It was decided that next season test weighings would be made of one case from every consignment from each station in order to arrive at an accurate standard.

Regarding claims under the Fruit Marketing Organisation, 1926, Mr. Olsson said that damage and pillage had admittedly resulted from using inferior cases. When fruit was lost in transit, it was presumed to be pilaged, and was paid for. Only new cases should be used.

Mr. Lenne (Ardmona) said they regarded the Department as responsible for trimming the last truck. The growers would do it if compelled, but they regarded it as adding to the freight.

Mr. Olsson promised to enquire into the matter.

In supporting a vote of thanks to Mr. Olsson, growers recorded their appreciation of the work done by the railways in advertising fruit.

It was also resolved to ask the railways to build more louver trucks.

Owing to the large number of items on the agenda, it was decided to appoint committees to deal with the more important subjects and co-ordinate the various resolutions thereon. A committee representing the Northern (or canning) interests, Metropolitan, berry growers, soft fruits, Citrus, cool stores, Apple and Pear growers, was formed to consider the proposed constitution for the re-organisation of the fruit industry, and other committees were appointed to deal with matters affecting Melbourne markets and the Fruit Marketing Organisation, reports to be presented to Conference the following day.

#### **Duty on Softwood Shooks.**

Mr. A. Lenne (Ardmona), in moving "That this Convention protest against the proposed increase of duty on softwood shooks," said that the canning industry had to ask for Government bounties, or they would not be able to export their goods, no matter what the quality. They were harassed by high tariffs, arbitration courts, and so forth, but no one told the primary producer what he would get for his labor. They had proved that the hardwood case was not suitable for the soft fruits, either for interstate or export trade, as it discolored the tins.

The motion was seconded by Mr. Lipscombe (Cool Stores Association) and carried, Mr. Churches pointing out, however, that a rebate of duty was given on the cases used for export.

#### **Rural Bank.**

Mr. F. Thomas (Bunyip), expressing regret that nothing definite had yet been done about the proposed Rural Bank, moved "That this Convention again urge upon the State Government the need for the establishment of the Rural Bank in the interests of primary industries."

Mr. J. H. Lang (Harcourt), in seconding the motion, stated that the fruit industry had been helped very materially in the past by advances under the Fruit Act, but that it now seemed impossible to get such loans, this statement being supported by Mr. W. J. Williamson (Portland) and others.

Mr. Churches suggested that Conference ask for the re-enactment of the Fruit Act, it being decided, after discussion, to add to the motion, that, pending the establishment of the Rural Bank, the part of the Fruit Act relating to loans to primary producers should be revived.

#### **Fruit Drinks and Essences.**

The Secretary (Mr. R. E. Boardman), pointing out that a great many

so-called fruit drinks were sold which were not made from fruit, moved—

"That this Convention urges the State Government to enforce the regulations already existing under the Pure Foods Act, requiring that all drinks described as 'Fruit Beverages' or purporting to be made from fruit should in fact be made from fruit, and that steps should be taken to introduce legislation providing that where confectionery purports to be flavored with fruit it should in fact be so flavored."

The motion was seconded by Mr. B. S. B. Cook and carried.

Moved by Mr. A. F. Thiele (Doncaster), seconded Mr. J. Stevens (Metropolitan)—

"That this Convention requests an adjustment of the tariff and excise provisions, so that more Australian fruit can be used locally in the manufacture of fruit essence."

Mr. Boardman stated that about £79,000 of fruit essence was imported last year, which could have been made in Australia. Spirit had to be used in the extraction of the essences of fruits, and duty was charged on the spirit imported and not on the flavoring. With adjustment of the tariff local manufacturers would be able to conduct an export trade.

#### **Institute of Horticulture.**

Mr. J. H. Lang, in moving that the Convention cordially approved of the formation of an Institute of Horticulture and the inclusion of a Pomological Committee, stated that much work still remained to be done in the elimination of unsuitable varieties of fruit and the approval of new varieties. In regard to export trade, a uniform standard of abbreviations for use on cases should be adopted for the whole of Australia.

The motion was seconded by Mr. A. F. Thiele and carried, Mr. Boardman outlining the useful work that had already been done through the medium of "Garden Week" towards the establishment of the John Cronin horticultural scholarship.

#### **Re-Organisation of the Fruit Industry.**

Mr. Lang, as chairman of the sub-committee which discussed reorganisation, in submitting his report said that the objects of the new organisation, would be to ensure the efficient organisation of fruitgrowers by means of district and sectional associations to foster co-operation, compile statistics for general information, and initiate and influence legislation to the benefit of all branches of the industry. The association should be named "The Victorian Fruitgrowers' Council," the membership to consist of representatives of the sections, as follows:—



Apples and Pears, metropolitan, canning fruit, Citrus fruit, and such other sections as might be admitted by the council, the representation to be not less than three for each section.

It had seemed almost impossible to combine the Apple growers under one central organisation, and the best scheme had seemed to be to extend the scope of the present Metropolitan Association to include growers residing within 27 miles of the G.P.O. Other Apple districts would come under the Apple and Pear section, and it might be advisable for these two to form a Southern Association, as they would have many interests in common apart from the Northern growers. For representation on the Council they would function separately.

The President and Vice-President of the Council would be elected annually by the members of the Council, and a Secretary appointed by the Council. Council meetings would be held half-yearly, or on the written request of any section, and a convention of delegates from all societies affiliated with sectional organisations would meet annually, the first meeting of the Council to be held six weeks from the date of the present Conference. Each section should pay an annual affiliation fee of £25, additional funds to be raised by means of a levy on fruit marketed in Victoria, or an acreage levy, or such other method as might be determined. The amount of the levy and the method of collection were to be decided by the Council, legal enactment to be obtained to enforce the payment of such levies. It was also proposed that the voting power at annual conventions should be confined to two votes. The council might take such steps as might be considered necessary to increase the distribution of fruit, any marketing project undertaken by the Council not to be subsidised by the Council. The Council would recommend that in six months' time the Council should supersede the State Fruit Advisory Board as the representative body of the Victorian fruitgrowers. Mr. Lang added that it had been decided to use the funds for the purposes of organisation, and not for commercial purposes.

Mr. Churches, who drafted the proposals which formed the basis of the report, stated that there should be no difficulty in regard to finance. Each section would finance itself by any method it chose. As far as the North was concerned, it was already organised, and he thought other sections would recognise the importance of electing representatives on the

Council. There would be difficulties, but the principle was right. "Remember you are going to elect men whose duty it will be to use these difficulties as stepping-stones to the success that you all desire."

The report was adopted unanimously, hearty congratulations being offered Messrs. Lang and Churches for their excellent work.

#### The Melbourne Markets.

The report of the sub-committee dealing with the Victoria Market was submitted by the Chairman, Mr. W. Mock (East Burwood), who said the Committee recommended that two members of the Executive Committee be appointed by that Committee to meet the Superintendent of Markets and consult with him on all matters

Mr. G. B. Minns, Market Superintendent of the Melbourne City Council, said the markets at present were conducted on wrong lines. The hours were sheer slavery. In Adelaide the markets opened at 7 a.m. in summer and 7.30 in winter, in Queensland it was 8 a.m. all the year round. The growers there had brought about the change, and the competition of the Chinaman had been eliminated.

The motion was carried, and a hearty vote of thanks accorded Mr. Minns for his interest and great help.

Moved Mr. W. Mock, seconded Mr. J. F. Wynne (Diamond Creek) and carried—"That the attention of the City Council be drawn to the practice of selling before the opening hours of the market, and that the by-law regulating the hours of selling be stringently enforced."

Mr. J. B. McDonald (Shepparton) moved—

"That, in the opinion of this Conference it is in the best interests of Victorian growers and the consuming public that the Western Market be removed to the vicinity of the Victoria Markets, so that both the wholesale and retail markets are adjacent to each other, this matter to be placed before the City Council for action."

The motion was seconded by Mr. A. F. Thiele (Doncaster).

Mr. H. M. Wade, speaking on behalf of the Wholesale Fruit Merchants' Association, said the matter had been investigated very thoroughly, and his Association was in favor of the move, under certain conditions, which were the subject of discussion with the City Council. He thought they would soon arrive at something workable. The motion was carried unanimously.

Mr. Wade also referred to the death of Mr. J. H. Young, a prominent fruit merchant, and on the motion of the President, the sympathy of the Conference was recorded.

#### Fruit Marketing Organisation.

Mr. F. Thomas, in submitting the report of the committee dealing with matters affecting the State Fruit Advisory Board and the Fruit Marketing Organisation, said that, in view of the great changes proposed in the organisation of the industry, their deliberations seemed not of much value. It had been a very difficult matter to deal with, and it was only by give and take on both sides they had been able to decide unanimously "that this Committee recommends to Conference a continuation of the Fruit Marketing Scheme, due consideration to be given to existing fruitgrowers' trading organisations." A lot of diffi-

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affecting their industry in the Markets. The motion was seconded by Mr. R. J. Lorimer (Diamond Creek) and carried.

Moved by Mr. Lorimer, seconded Mr. W. J. Cook (Diamond Creek), that "The City Council be requested to alter the hours of selling at Victoria Market from 4 a.m. to 6 a.m.; also that representatives be appointed to meet representatives of other interested bodies in conference with a view to bringing about that result." Mr. Lorimer described the present hours as unrighteous, and referred to the competition by the foreign element.

Mr. H. Clay (Doncaster) opposed the motion, asserting that distributing agents had to catch the early trains to country districts with the fruit.

Mr. C. Mawdsley, representing the Retail Fruiterers' Association, said the proposed hours would facilitate business, and Mr. W. Mock urged the change on behalf of the young men.

cult pioneering work had been done, and it would be waste of money to scrap this organisation when it had learned so much in the past, and was likely to be able to do much good in the future. The representative of Quantong asked only for fair consideration. The Committee also recommended that an adequate levy be made on the fruit supplied, so that the Fruit Marketing Organisation will become self-supporting.

Mr. H. J. Willoughby (Tyabb) in supporting the recommendation, said

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that if an organisation was necessary if would justify its existence by paying its own way. Control should be in the fruitgrowers' own hands. The Superintendent of Horticulture was an enthusiastic man, but it was hardly fair to expect him to take on the Chairmanship in addition to his own duties.

Mr. B. S. B. Cook said the fruit-growers had asked that Mr. Ward be permitted to be Chairman of the Fruit Marketing Organisation, on which the fruitgrowers had their representatives. There had been no Government restraint on the opera-

tions of the organisation.

Mr. C. H. Jost (Quantong) said he was only too happy to withdraw his opposition, as it appeared there was nothing to oppose. The only thing he had been afraid of was unfair competition. The organisation was to work on business lines, and growers' trading concerns given consideration.

The recommendations were adopted, and a hearty vote of thanks accorded the Chairmen of the various Committees.

### Advisory Board.

In the following motion the convention expressed its opinion on the subject of representation on the Advisory Board:—

"That, while thanking the Minister for Agriculture for increasing the representation of fresh fruit growers on the State Fruit Advisory Board by an additional member, we consider the representation to be still inadequate, and that there should be four members instead of three."

"That we express our disappointment at the Minister's action in appointing members of the State Fruit Advisory Board without giving us the promised opportunity of voting, and that we are strongly of the opinion that future appointments to the Board should not be made without opportunity being afforded growers' Associations to nominate members and vote for their election."

On the motion of Dr. Soilleux (Ringwood), it was decided that "in the opinion of this Convention there should be a Department of Horticulture under a responsible Minister as distinct from the Department of Agriculture."

Referring to the bounty on canned fruit, Mr. A. Lenne (Ardmona) stated that 30 million tins were put up last year, 17 million tins being sold in Australia. There was an increase in production, and representations had been made to the Federal Government for a bounty on export. They had succeeded in getting a bounty of 1/- a dozen, and hoped to be able to carry on.

### Development of Outer Ports.

Mr. Lang moved:—

"This convention expresses its appreciation of Portland as a port for the Western district, and trusts that the development of Victorian outer ports will be specially proceeded with."

The motion was agreed to.

During the course of the Conference instructive papers were read and information exchanged on the following subjects:—

"The Interstate Fruit Trade" (Mr. F. J. Churches, Kyabram, and Mr.

D. G. Wills, Sydney).

"The Merchandising of Fruit from the International Standpoint" (Mr. W. H. Murray).

"Soil Bacteria" (Mr. F. Thomas, M.A., Bunyip).

"The Organisation of the Agricultural Department and the Horticultural Division" (Mr. J. M. Ward,

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"Codlin Moth: Spraying and Trapping" (Mr. J. H. Lang, Harcourt).

"The Advantage of Insurance of Export Fruit" (Mr. H. R. Chandler, Croydon).

The Convention also appreciated the attendance of Mr. H. W. Davey, Chief Orchard Supervisor; Mr. Fysh, Plant Pathologist; Mr. G. B. Minns, Market Superintendent; Mr. H. M. Wade (Exporters' Committee), J. Davis (Wholesale Fruit Merchants), C. Mawdsley (Retailers).

A demonstration of a Canadian case was also given by Mr. W. Lipscombe, Ringwood.

On the opening day the delegates were entertained at luncheon by the local committee and the ladies of Portland, and on the Thursday they were again entertained by the residents at a concert, moving pictures and dance.



Friday was devoted to visits to the cool store at Gorae and places of historic interest in the town, and an interesting drive to Cape Bridgewater. Everyone expressed great appreciation of the hospitality extended by the people of Portland.

**CONSTITUTION FOR THE  
UNITED FRUITGROWERS' OR-  
GANISATION, ADOPTED BY THE  
FRUITGROWERS' CONVENTION  
AT PORTLAND, MAY 20, 1926.**

**Name.**—The Association shall be named the Victorian Growers' Council.

**Objects.**—To secure the efficient organisation of the fruitgrowers of Victoria by means of district and sectional Associations—to foster co-operation in every legitimate way and generally encourage growers to control their own industry—compile

vacancy occurred through the sectional Association.

**Officers.**—Officers of the Council shall consist of President, Vice-President, and shall be elected annually by the members of the Council.

**Secretary.**—The Council shall appoint a Secretary and such other officers as may be necessary, and shall determine their duties and salary.

**Finance.**—Each section shall pay an annual affiliation fee of £25, which must be paid before the first Council meeting in each year. Additional funds shall be raised by means of a levy on fruit marketed, acreage levy or such other method as may be determined by the Council. The amount of such levy and method of collecting same shall be determined by the Council. The necessary statutory power for enforcing payment thereof to be obtained.

**Meetings.**—Council meetings shall be held half-yearly and at such other times as may be decided upon by the Council or upon the written request of one or more sections. Written notice of the meeting, together with agenda paper to be sent to each member of the Council seven clear days before the date of meeting. Minutes of all meetings shall be kept.

**Quorum.**—A majority of the members of the Council shall form a quorum.

**Reports.**—A report of business transacted at all meetings of the Council shall be sent to the Secretary of each sectional Association.

**Annual Convention.**—An annual Convention shall be held at such time and place as may be determined on. Delegates from all affiliated Associations may attend in any number, but the votes of each such Association shall be limited to two. The object of the Convention shall be to obtain an expression of opinion on matters affecting the fruit industry. Each affiliated Association may submit proposals which shall be in writing and forwarded to the Secretary 21 days prior to the date of Convention.

**Fruit Marketing.**—The Council may take such steps as it considers necessary to increase the consumption and improve the distribution of fruit, but if any marketing scheme be adopted, the Council shall not contribute to the expenses of or subsidise the same.

The first meeting of the Council shall be held at a place and time within six weeks of the holding of the present Convention to be decided upon.

The Council shall recommend to the Minister as soon as it has been properly organised and effectively working, but not less than six months

from the date hereof, that as it represents the united fruitgrowers of the State, it should supersede the Advisory Board.

**SHEPPARTON IRRIGATORS.**

The annual meeting of the Shepparton Irrigators' Association was held on April 27. The retiring President, Mr. E. J. Rule, congratulated the Association on the success of its co-operative efforts. The membership was now 220; they had a credit balance of £115. By better arrangement for clearance of growers' cheques, £500 could be saved annually.

A resolution of confidence in the Irrigation Commission was carried unanimously, stating they had no desire for the appointment of elective Commissioners.

Mr. H. B. Lincoln engineer of the Shepparton branch of the State Rivers and Water Supply Commission, expressed gratification at the passing

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statistics for general information—initiate and influence legislation to benefit all branches of the industry and generally to act in the interests of and for the advancement of horticulture.

**Membership.**—Membership shall consist of representatives from the following sections of the industry:—Apples and Pears, Metropolitan Association, Citrus, Canning, and such other sections that may be admitted by the Council. The representatives shall not be less than three from each section.

**Method of Election.**—The members of the Council shall be elected annually by their respective sections of the industry through their Associations or as such Associations may decide.

**Vacancies.**—Should any vacancy occur the position on the Council may be filled by that section in which the

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of this resolution. Mr. Cattanach, the Chairman of the Commission was doing his utmost for the irrigators.

Mr. J. McDonald was elected President, and Mr. J. A. Rushton, Secretary.

**AUTUMN STRAWBERRY CROP  
FAILS.**

Disappointment has been expressed by essence manufacturers because of the failure of the autumn crop of Strawberries in the Dandenong Ranges; several tons of Strawberries were wanted by the essence manufacturers. The long-continued dry weather during March was responsible for the failure.



GIBBS, BRIGHT & CO.—See Page XIV

## FRUIT MARKETING ORGANISATION.

Conference on May 4.

### Conflicting Views.

**F**RUITGROWERS from various parts of Victoria assembled in Melbourne on May 4 to consider the report of the Fruit Marketing Organisation of the State Fruit Advisory Board, and to discuss the best methods for the future marketing of fruit. Mr. J. M. Ward, Superintendent of Horticulture, presided.

The Conference was opened by the Minister for Agriculture, Col. Bouchier, who outlined the formation of the Fruit Marketing Organisation, which was brought into being in response to the appeals of growers for assistance in disposing of their surplus fruit. Many schemes had been submitted for consideration, but the State Fruit Advisory Board recom-

was a great success; had it not been for this organisation there would have been many hundred tons of Peaches rotting on the ground, instead of being disposed of in Melbourne, and for this one thing alone it had justified its existence."

The Minister continued that he would not recommend the Government to give any further assistance to the fruitgrowers while they were disunited; they would have to finance themselves in the future. Various suggestions had been made about an orchard tax, levy on production, or acreage tax, and it was proposed to bring in an Enabling Bill, whereby, by regulation, each section of the growers could choose which form of taxation they preferred. "If you know of something better, put up your proposition, and I will consider it," Col. Bouchier said. "Before bringing in this legislation, I will send it down to your State Fruit Advisory Board, and if they have any further recommendations or amendments to make, I am prepared to give them every consideration. I feel sure by doing that you will have a measure that will represent the fruitgrowers of the State."

He supported the action of the Fruit Marketing Organisation in calling the Conference, for the purpose of getting the experience of the growers and their suggestions for the coming season. He looked to the State Fruit Advisory Board as his official advisers. He again urged the growers to get together and forget their differences. If they did not want assistance, the Government would not need to be told twice. He wished the Portland Conference every success.

Mr. M. J. Canny, General Superintendent of Railway Transportation, representing the Railways Commissioners, mentioned some of the difficulties that had been encountered. Up to the end of January, when the scheme commenced to function, 1,857 orders had been received, and another 881 were received early in February. But orders were not fulfilled, and in some cases, owing to the use of faulty cases and bad loading, delivery could not be effected. Complaints were general from station masters. The scheme appeared to have big possibilities if growers would organise.

A delegate suggested that the railways were responsible for supervising the loading. In reply to criticism, Mr. Canny said he would arrange

for an officer to visit the various districts.

Dr. S. S. Cameron, Director of Agriculture, said that the more fruit was marketed in the country districts, instead of coming to Melbourne, the better for all. If this scheme were not supported by the growers, he did not think the Government would assist any other. He appealed to growers to give it a fair trial.

The report of Mr. B. S. B. Cook, Manager of the Fruit Marketing Organisation, was taken as read. Mr. Cook in explanation, said that the scheme had broken down where least expected, viz., on the part of the growers to supply. Some growers were to blame, but others were victims of the force of circumstances, and while secretaries of districts acting in an honorary capacity had doubtless many details to attend to, they did their best in difficult cir-

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mended this as the best, and it was decided to try it out for six months. The Government was quite sympathetic to the fruitgrowers, and was out to help them wherever possible, provided that they would organise and come to the Government as a united body. An advance of £2,000 was made to finance the scheme.

"Although the Fruit Marketing Organisation might not have been a success right through," Col. Bouchier continued, "it was an honest attempt to solve the problem of the marketing of our fresh fruit that we have been trying to solve for a great many years. (Applause.) One of the reasons why it was not as successful as had been anticipated was the fact that a lot of the contracts were not carried out, and complaints were received that orders were not fulfilled. The railways had given every possible help, and deserved all credit. As far as the marketing of Elberta Peaches was concerned, the scheme

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cumstances. The station masters first sent in their own trial orders before accepting orders from local residents, and finding deliveries uncertain, had not gone on with the scheme. They had only 5,000 orders, representing 5,500 cases of fruit. With better organisation on the part of the growers the total would have been nearer 50,000 cases.

The Railway Department had rendered excellent service; in the station masters and station mistresses the growers had 800 salesmen. They were "talking" fruit and doing useful propaganda. In Peach Week alone the Railways Department sold 90 tons of Peaches in eight days, while on the stand outside the Melbourne Town Hall, 1,200 cases were sold in two days. The Elberta Peach was known to-day and appreciated better than ever before.

The statement of accounts showed that of the available Government



grant of £2,000, £1,440 had been drawn, and the expenditure was £1,123, made up of office furniture, etc. £114, advertising £108, rent £32, printing £99, salaries £776, travelling £37. On the fruit account, £2,090 had been received, of which £1,853 had been paid to growers; the balance of £109 was awaiting adjustment; £233 had been refunded to customers for fruit not delivered. Complaints regarding quality and non-delivery had been received in respect of practically every district.

The scheme should not be judged on these figures, but rather on what would have been done had the fruit been available. Entirely new avenues for the sale of fruit had been opened up to country districts, which, of course meant that it was better for the Melbourne and metropolitan markets.

Mr. J. H. Lang (Harcourt) stated that he offered friendly but candid criticism. The scheme started hurriedly without profiting by the experiences of organisations which had attempted something similar in the past, and failed. The Fruit Marketing Organisation made an initial mistake of trying to organise from the centre outwards. It was better to build up strong district organisations first. Quantong was doing a big direct country trade. Harcourt sent 80,000 cases annually direct to retailers, none of which came on the Melbourne markets. (Applause.) There were other growers' organisations in various districts. He suggested that these and other organisations should meet in the central body and devise a scheme by which they would not come into competition with each other, thus lowering prices. These organisations could allot the State into areas on which the district best situated could concentrate. For instance, Harcourt had received orders for Plums at 7/- a case to be sent to Warrnambool. This was wasteful, as the fruit could have been supplied from a more convenient district. Allowing 11d. for the station master and administration, and 2/- freight, they were receiving less for high-quality fruit than factory prices for "orchard-run" quality.

The system should not be financed by an orchard tax, because this might lead to extravagance. A business organisation should pay its own way. With this suggested combination of districts and packing sheds finance could be obtained from the Government under guarantees for repayment over a series of years.

Continuing, Mr. Lang said the scheme had broken down. Why? There was too much head and not enough body; or else either (i) the

fruit was not available, or (ii) prices were not attractive enough. There were possibilities in the scheme, but it needed to be managed differently from in the past.

Mr. Williamson (Portland) said that private enterprise was better than Government assistance every time. Two "fruit" trains had arrived at Portland with no fruit. Packing sheds were essential to any distribution scheme. With the advent of their district cool store they could spread the market for 15,000 cases of Apples; another 15,000 cases were sold for export.

Mr. C. H. Jost (Quantong) said his district was absolutely opposed to the

to 6/- nett—a loss of 4/- a case. "We were doing very well until this mob butted in," continued Mr. Jost, amid laughter and applause. "We organised to supply the shops in the country, not individuals."

Mr. Blackburn (Merrigum) stated that in addition to the orders received through the F.M.O., hundreds of orders came direct from the satisfied members of the public. He hoped to build up a big direct-order trade.

Mr. Wynne (Diamond Creek) urged the supply of refrigerated trucks for the northern trade.

Mr. Tully (Doncaster) said the kerb market system kept 25,000 bushels per annum off the Melbourne market. He gave instances of the failure of the F.M.O., but said that there were possibilities in it, but he disagreed with the terms of the proposed Enabling Bill.

Mr. Thompson (Merbein) said a scheme was necessary to take Grapes direct to the consumer. Growers, however, could not bind themselves definitely to supply on certain dates. There must be no element of compulsion, and growers should not be bound down in writing to supply. Very many growers were doing a big trade direct with the shops.

Mr. Henderson (Toolamba) said that a commercial proposition such as this should be financed directly by those concerned. (Applause.) He urged the establishment of packing sheds and suitable grades. The orchard tax was not wanted for this work, but for a general welfare organisation.

Mr. J. W. Bailey (Narre Warren) said the F.M.O. did its best in the hurried circumstances of starting. This had been a good selling season in Melbourne and Sydney, thus reducing the quantities available for the F.M.O., and growers had not stood up to their obligations to the Marketing Organisation. He believed that this scheme would help growers to get rid of the large-sized Apples.

Mr. W. E. James (Harcourt) said that the Harcourt Progress Association did not want the scheme, but it appeared to have possibilities for those who desired it. He challenged the Apple and Pear growers present who did not intend to support the Marketing Organisation to retire without wasting the time of the meeting.

Mr. Clayton (Kyvally) stated that the programme of the F.M.O. appeared to be like a machine with cast-iron cogs and had broken down. A more flexible and adaptable scheme was needed.

Dr. Soilleux (Ringwood) stated that if growers were to be taxed, they

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Fruit Marketing Organisation's scheme. His Association had been built up on service, and the growers were paid for the fruit and received a bonus on the profit of their organisation. They had reserve funds totalling £2,000. Early this season growers were receiving 10/- cash, with case returned, for early Peaches and Apricots supplied to the Wimmera district. Then came the Fruit Marketing Organisation's schedule, with Apricots at 8/-, which included freight and commission to station masters. This reduced the Quantong growers'

should have an opportunity of electing their representatives. The proposed Enabling Bill as outlined did not appear to be desirable. He moved that a committee be formed to consider the details of the report of the Fruit Marketing Organisation. Mr. Williamson seconded.

Mr. Cole moved an amendment that the report of the Organisation be referred to the Portland Conference.

There was considerable confusion at this stage as delegates were leaving the room and several were speaking at once.

Mr. Gorton then moved that the report of the Fruit Marketing Organisation be adopted, with the deletion of the paragraph referring to the Enabling Bill. This was seconded and carried.

The amendment by Mr. Cole was

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then put and declared lost, and the motion moved by Dr. Soilleux was carried. A committee was then appointed to consider the report and to make a statement to the conference in the evening.

The Manager's report was adopted after the elimination of the final paragraph embracing the suggestion of the Fruit Marketing Organisation in relation to the Enabling Act under

which revenue might be raised.

A sub-committee was appointed to report on the Manager's report, such sub-committee consisting of:—

Messrs. J. McDonald (Shepparton), S. Brentnall (Bamawm), and R. Watson (Perricoota), representing the Citrus section.

Messrs. G. E. Mock (metropolitan), W. J. Williamson (Portland), C. Wallace (Wantirna), representing Apples and Pears. Messrs. E. Blackburn (Merrigum), W. Stewart (Shepparton), and Thompson (Merbein), representing Soft Fruits and Grapes.

The sub-committees not separately, but subsequently presented a joint report as follows:—

### Soft Fruits and Citrus.

1. That we deal only with Associations or Packing Houses.
2. That fruit be supplied in grades to be fixed when the season arrives.
3. That no single case or half-case orders or mixed case orders of soft fruits be sent to Shepparton Orchard Products.
4. That 15A and 15B clauses be adopted as follows:—
15. (a) That each organisation or packing house willing to supply fruit under the schedule of prices agreed upon, be asked to 'guarantee in writing that a certain quantity of fruit of varieties to be named, shall be available between certain dates to be set out.
- (b) That all growers agreeing to supply their organisation or packing house with orders be required by such association or packing house to enter into a written agreement that they will make available certain fruit to be specified; certain dates to be fixed at prices set out in the schedule. Penalty for breach of agreement—no further orders to be sent to any such grower.
5. That duplicate rail receipts be supplied to the Fruit Marketing Organisation as soon as possible after despatch of fruit.
6. That a flat rate be fixed for each variety, such price to cover freight, station masters' commission 9d., F.M.O. levy 3d., and local Association levy for Secretary 3d.
7. That the price of half-cases be fixed at 1/- more than half the price of the full case.
8. That cartons of Grapes be not supplied in lots less than eight.
9. That clause 15C be recommended to districts—
15. (c) That a representative of the Fruit Marketing Organisation be appointed in each sup-

plying centre to carry out the following duties:—

1. To supervise the distribution of orders.
2. Record dates and to whom such orders were handed for execution.
3. Inquire from time to time respecting fulfilment of such orders, so that delays shall be obviated.
4. Have power to transfer or withdraw orders from growers who have no reasonable prospect of immediately supplying them, and to transfer such orders to other growers, or if the fruit is not immediately procurable in the district to forward such orders back to

COVENT GARDEN,  
LONDON

**Ridley, Houlding  
& CO.,**

**Large Receivers of Australian  
Fruits.**

Solicit Consignments of

**Apples, Pears, &c.,**

Best market prices and prompt  
account sales returned.  
Correspondence invited.  
Representative in Victoria

THE  
International Fruit & Mercantile Co.,  
410 Flinders Lane, Melbourne  
MURDOCH BROS., Hobart

HAMBURG  
(GERMANY)

**J. H. Lutten & Son**

Hamburg (Germany)

**Fruit Brokers & Auctioneers**  
Established 1835

**FINEST TABLE APPLES  
A SPECIALTY**

**Sale Room "Fruchthof"**

Consignment of Apples Solicited

Best market values and  
most favorable conditions

Cash advances made if desired

Melbourne, so that they can  
be placed elsewhere.

10. That clause 15D is approved and left to the F.M.O. for action.
15. (d) That closer relations be established with district organisations or packing houses in order that any special scheme, including direct selling



to the public on the order basis or by fruit trains, shall be placed on a more satisfactory basis to prevent arrangements clashing.

11. That arrangements be made for Citrus fruits to be brought under the scheme.
12. That consideration of the Enabling Bill be deferred until the draft of the Bill is made available as promised.

#### Recommendations by Apple and Pear Growers' Committee.

1. Agree to some form of organised marketing scheme for Apples and Pears, provided it is administered by a board regularly elected by growers.
2. That any supplies of Apples and Pears handled by the marketing authority be obtained

lation. On the other hand, if the Apple and pear section did not desire to raise money in this way, they need not come under the operations of the Act or regulations at all. A copy of the Bill when drafted would be submitted to the State Fruit Advisory Board, and the Chairman invited all growers interested to attend and take part in the discussion, although naturally only the appointed members of the Board could vote.

The meeting then closed with a vote of thanks to the Chairman.

#### FRUIT CROP REPORT.

In submitting its fruit crop report for April, the Department of Agriculture advises as follows:—

##### Deciduous Fruit.

Growers have almost completed the harvesting of Apples and Pears, exceptions being late varieties of the former. There are some fine crops of Yates and Rokewoods, and these, owing to recent good rains and recurring showers, have greatly improved in size and color, in addition to being very free from blemishes.

Excellent prices still rule for good fruit. Many growers are now busily engaged in grading and casing their fruit.

The Peach crop has been harvested, and canneries which have had a very successful season, are now dealing with Peaches that have been held in cool storage. Altogether there were about 100,000 cases of canning Peaches and Pears held in cool storage during the peak period of canning; these have since been taken out and canned, thus prolonging the canning season and allowing of a greater quantity of fruit being canned.

##### Viticulture.

The season has undergone a complete change since the rains of March 20. From dry and hot it has become cool, and at times showery. Cold spells and even slight frosts have been experienced in some parts of the State. At the week-end, April 9-12, a rain storm extended over the whole State. Very heavy rain fell in Swan Hill Shire, over four inches being recorded at some localities. At Mildura it was much lighter.

In the dried Grape districts the change was most unwelcome. The season which commenced under ideal drying conditions became only moderately favorable after the rains of March 20. Since the rain storm of April 9, conditions have been decidedly adverse. Especially in Swan Hill Shire, where the fall was particularly heavy, a good deal of late fruit has suffered much damage, and will be quite unmarketable. Roofless racks have felt the rain most.

Currants cropped well, and an excellent sample has been turned out. Sultanas are light: those dried before the rain are of excellent quality, whilst later dryings are somewhat uneven. There have been many complaints concerning sticky fruit since the last rains, especially with hot-dipped fruit.

Though premature to make a definite statement in view of the contradictory opinions held in some quarters, the

##### cold dip process

seems to have stood the ordeal of adverse drying conditions remarkably well.

Signs of anthracnose are to be found occasionally, since the rains, on tips of Sultana canes trailing on the ground. Preventive swabbing against this fungus must not be neglected

## J. G. MUMFORD

(Established 1906)

### Fruit & Vegetable Salesman

Account Sales Posted Daily

### APPLE EXPORTER

"Fruit Exchange,"

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Branches: { Western Market  
Victoria Markets

MELBOURNE

Reference—Satisfied Growers in all States

next winter, notwithstanding the dryness of last summer.

In the

##### wine-growing districts

the rain came too late to benefit yield. It checked drying-out of the berries, but also checked increase in gravity of Grapes left hanging on the vines. Gravities were, on the whole, satisfactory, though not so high as it would be logical to expect after so dry a summer. The average yield seems to be about two-thirds of a normal season.

Fermentation temperatures have been very favorable this month, and the quality of the wines excellent. Fungous diseases are conspicuous by their absence.

The advantages of thorough tillage in a hot dry summer have been strikingly demonstrated. Vineyards which were repeatedly cultivated suffered but little reduction in yield in spite of the very low rainfall they have had to do with.

##### Citrus.

The Orange crop is now ripening.

Bankers:  
**COMMERCIAL BANK OF AUSTRALIA,**

Collins Street, Melbourne.

Remittances with Account Sales rendered promptly.

#### FOR A SQUARE DEAL

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Wholesale Fruit and Produce Commission Agents  
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471 Flinders Lane, Melbourne.

only through packing sheds, this provision not to apply to irrigation areas.

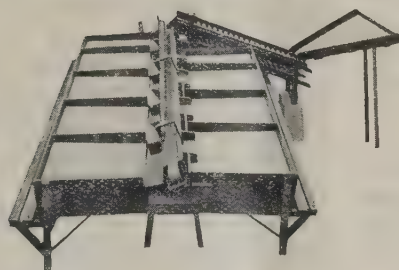
On the Conference resuming, Mr. J. R. Gorton moved that the above reports be adopted, and Mr. J. McDonald seconded the motion. The motion was carried.

It was also resolved that the report of the meeting be submitted to the State Fruit Advisory Board.

In explaining the details of the proposed Enabling Bill, the Chairman stated that it was intended to generally lay down the principle of raising money by an orchard tax, case levy, or fruit stamp, and that the details could be brought in by regulation. For instance, if the Citrus growers desired a case levy, they could apply to the Department, and if the Department were convinced that the industry desired such case levy, the necessary regulation could be issued which would be legally binding. Similarly, if the Peach growers who were now operating on a voluntary levy desired that made compulsory, this could also be done by regu-

# Why not Make this a Record Season ?

You can—even if you have a light crop.



Model 10, with Elevator Conveyor attached.  
Spring Floor Bin on each side of the machine. Each Bin will hold up to 3 bushel cases of fruit.

Size your

## Oranges—Mandarins—Lemons

through a "Lightning," and you will have a

BETTER PACK  
and  
BETTER PRICES.

LESS EXPENSE  
and  
LESS LABOR.

Watch this advertisement next month for particulars of our new Single-sided "Penang." It is just the thing for you—Cheap, Light, and Good.

THE CHEAPEST 7 GRADE SIZER BUILT.

The "Lightning" IS the only Grader for your Mandarins—it CANNOT bruise, and WILL size them accurately and quickly. Try it, and you will always be satisfied.

## "Lightning" Fruit Grader Co.

Cable & Telegraphic Address:  
"Lightning," Melbourne

5 Hoddle Street (2 doors from Victoria Parade), Collingwood, Melbourne.

Many growers still persist in sending green and immature fruit to the market. The Regulations under the Vegetation and Vine Diseases Act provide that all Oranges and Lemons intended for market purposes shall be wholly colored and fully matured.

The weather conditions during the past month have been favorable to the growth of trees. In many places where irrigation was not possible during the dry spell, trees suffered from want of water. Since the rains good growth has resulted, and a very heavy blooming is now showing.

### BUNYIP COOL STORES.

The opening ceremony of the cool store of the Bunyip Orchardists Pty. Ltd., was performed on April 29 by Mr. J. M. Ward, Superintendent of Horticulture. This store has a capacity of 6,000 cases in two sections of 3,000 each; the plant and machinery cost about £2,600. The machinery, which consists of an eight-ton Linde compressor and 20 h.p. Ruston-Hornsby crude oil engine, is sufficient for double the present capacity of the store, to allow for expansion according to the district's needs.

Forty shareholders took up 5,500 of the 6,000 shares offered. Practically all the fruitgrowers in the Bunyip area took up shares, and in addition some business men also subscribed. The directors are Messrs. R. Flett (Chairman), W. G. Kraft, R. Nash, with Mr. Fred. Thomas as Secretary. Instead of approaching the Government or the Savings Bank, the initial finance was arranged locally through the Commercial Bank.

In his opening remarks, Mr. Ward congratulated the district on its progressive spirit. It was better for growers to show a spirit of self-reliance rather than to be always running to the Government.

Mr. Thomas thanked all who had assisted. Messrs. J. W. Bailey and R. E. Boardman spoke in terms of congratulation to the district, and particularly complimented Mr. Thomas on his fine work. Afternoon tea was served by the ladies.

It is estimated that the store represents shareholdings comprising about 250 acres. Most of the local growers' acreages are small, being from eight to ten acres. The average local production is about 20,000 cases annually. Bush land costs about £4

to £6 per acre. The ground is of a granitic nature, having a retentive clay subsoil, and is capable of producing Apples second to none in the State.

\* \* \*

On the journey between Dandenong and Bunyip it was noted that big constructional work was in progress in the making of drains, particularly in the Narre Warren area. The land thus reclaimed is eminently suitable for vegetable and flower culture, and settlement in these industries is proceeding. The district is within about 25 miles of Melbourne—easy carting distance.

### The Clue.

There was no doubt about it. Michael Muldoon had lost his five pound note. How, then, was he to get back to Dublin?

But, sure, the London police would find it for him! Into a station marched Michael and told his story to the sergeant.

The officer was inclined to be sympathetic.

"I suppose you wrote down the number of the note?" he asked.

"O! did that, sorr!" said Michael, proudly.

"What is the number, then?"

"And isn't that just what I don't know myself? I wrote it on the back of the note!"



## Queensland.

Citrus: Pine Apples: Bananas: Bunchy Top in the North:  
Tropical Nursery Needed.

"Fruit Week" in Brisbane.

Citrus Fruits.

(By Our Correspondent.)

THE vagaries of our climate are evidencing their effect upon the Orange crop this season. Fol-

lowing upon a promising introduction, hot and dry conditions have occasioned practically a halt in development, except such localities as benefited by odd showers.

During dry spells

irrigation is freely discussed and immediately dropped on a change in the weather. As a whole the

natural features of fruit lands do not admit of any comprehensive scheme of irrigation—individual plants would in most cases be required. The irrigable western lands upon which no finer Citrus fruit can be produced, are said to be too far from the markets, but the difference in values between first and second grade fruit would more than compensate for the additional railage.

### Pineapples.

Though the Citrus crop has been handicapped, dry air favors the development of Pineapples, adding both to the acid and sugar content. It may be remarked that much of the fruit sent south early in the season is but a poor representation of a Pineapple, the contents of which undergo practically no alteration after the fruit is removed from the plant. Moral suasion has no influence upon offending shippers and the constitution decrees that no State law can be applied, consequently the shipper of green fruit can persist, and no one can say him nay.

It is admitted that much requires attention in Citrus orchards, but foliage would not stand oil sprays until more congenial weather.

### Cyaniding was practised

to some extent in earlier years, but the cost of outfit and incidental details render the cost to the small grower prohibitive.

The State recently benefited by a visit from Mr. E. R. Wolstenholme (Sydney), and one result will most likely be the adoption of calcium cyanide in preference to spraying against insect pests.

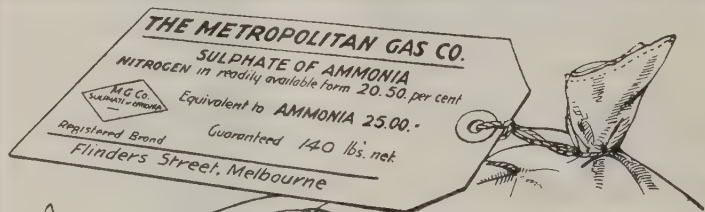
On being given the opportunity the horticultural field staff has demonstrated that various maladies to which Citrus trees are subject—and sprays recommended—are remediable by soil treatment, varied according to circumstances.

The bunchy top Banana problem is still of much concern, its presence being reported at Innisfail in the North, attributable, it is stated, to suckers imported from Southern areas.

One can hardly write except under exasperation in the knowledge that the sugar surplus was long foreseen by northern officials (it was most obvious to all concerned), when, backed by the northern press, an endeavor was made to establish a

### purely tropical nursery

under capable management (and subsequently a Banana nursery as less expensive), yet their suggestions were turned down with impunity, and now "bunchy top" is in the finest Banana lands contained within the tropics as a result of importation



## The Tag on the Bag

is the true test of the value of the fertiliser on which the success of your crop is so largely dependent.

When you buy

## SULPHATE OF AMMONIA

you are certain that you are getting the cheapest and most efficient nitrogenous fertiliser sold, and the fertiliser manufacturer who uses Sulphate of Ammonia in his mixed manures fully appreciates its excellent qualities too. You can easily distinguish a good complete manure (one containing nitrogen, phosphoric acid and potash) by its high Sulphate of Ammonia content.

Handbook "Productive Fertilisers" is mailed free on request to  
The Australian Sulphate of Ammonia Propaganda Committee  
360 Collins Street, Melbourne.

from the South. Certainly a part of Bribie Island, in Moreton Bay, is designated a State Nursery, and half the expenditure incurred in connection with this white elephant could have been profitably devoted to Northern requirements.

If recommendations of country officers are unworthy of cognisance, then such offices should be abolished, for the pinnacle of intelligence and appreciation of financial requirements are recognised officially as being concentrated in Brisbane. Growers are dissatisfied, and the Department unpopular. There are pertinent reasons for both.

In the capital during March, a "fruit week" was held, and most excellent displays were exhibited in many of the principal shop windows. Temperate, semi-tropical and tropical fruits were exhibited in profusion. In many lines it was recognised, not as a sample of what is produced, but what can be grown by the application of intelligent means—this exposed rather a wide margin between exhibits and average shop supplies (also those in street barrows which vie with many shops), and showed the extent to which topping can be practised on a gullible public. We are told that we have regulations against the practise, so have we against other defaults, but then their application is a matter of "policy." No inspectors can prosecute without the necessary authority.

#### LEAGUE OF FREEDOM.

Action by Queens Producers in Queensland.

#### State Interference Resented.

"Recent events have rendered necessary the formation of a strong, independent, and widespread union among the primary producers," said Mr. C. Potts, in submitting a draft constitution to a meeting of the provisional executive of the Primary Producers' Union (writes the Brisbane correspondent of the Melbourne "Argus"), on May 4. Mr. Potts said that it was essential that any primary producers' union should be strictly non-political. There were already official State organisations which were too much under political influence. They were too much like Government Departments. They producers did not effectively control them.

Mr. J. Corbett, who presided, said that the formation of this union was forced on the producers by the action of the Council of Agriculture in establishing a committee of control. They acted in such an arrogant manner

that primary producers had no say in the disposal of their commodities. There were no organisations to counteract such acts until the Leagues of Freedom came into existence. These leagues proposed to merge into the union when it was formed.

The draft constitution, with minor amendments, was adopted. It was decided to urge producers' unions to take similar action.

#### PRINCIPAL COUNTRIES PRODUCING APPLES.

When opening the Bunyip Cool Store recently, the Victorian Horticultural Superintendent, Mr. Ward, gave the following interesting statistics regarding the world production of Apples:—

| Country.                     | Annual Production (bushels). |
|------------------------------|------------------------------|
| United States of America     | 202,842,000                  |
| France . . . . .             | 165,465,040                  |
| Austria .. (includes Pears)  | 31,490,570                   |
| Czecho Slovakia . . . . .    | 15,850,000                   |
| Italy.. . . (includes Pears) | 13,650,000                   |
| Canada . . . . .             | 13,479,549                   |
| England and Wales . . . .    | 11,600,000                   |
| Spain . . . . .              | 8,800,000                    |
| Yugo Slavia . . . . .        | 8,600,000                    |
| Australia . . . . .          | 6,546,134                    |
| New Zealand . . . . .        | 633,635                      |

#### NO FRUIT FLY IN NEW ZEALAND.

The visiting Argentine entomologists, Senores Trelles and Blanchard, after a tour of inspection of North and South Islands, during which they made a careful examination of the fruit that offered the best conditions for fruit fly development, reported to the Consul for Argentina that they had not been able to find even the slightest trace of this pest. Their view is—geographical situation and special climatic conditions of New Zealand are wholly unfavorable to the fly, and that therefore it is highly improbable that this pest could ever become a menace to the fruitgrowing industry of the Dominion.

In view of the negative results that they obtained through their inspection they will request their Department of Agriculture to remove definitely the quarantine established by the decree of last April with regard to the importation of pomaceous fruits from New Zealand.

Merchant (to applicant for situation): "Your handwriting is good enough; but can you write shorthand?"

Applicant: "Oh, yes, but it takes me longer."

## The Mote Patent Extension Ladder Co.



Expert Manufacturers of—  
**Orchard Steps**  
of Various Patterns

LADDERS — Extension and Ordinary.  
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'Phone: W 1301.





# New South Wales.

District News and Notes

Successful Organization

## NEW SOUTH WALES.

### The Season at Orange.

When you hear of 300,000 boxes of Cherries leaving Orange by train, destined for all parts of New South Wales and Queensland, branded in bold letters—**Packed by the Orange Fruitgrowers' Association**, you will realise that the Orange Fruitgrowers have placed their district on the map in no unmistakable manner. This record is likely to be eclipsed in the next few years, as at least 50 per cent. of the trees have not yet reached the bearing stage, and each year sees thousands of young trees planted.

Prices should have been better to compensate for the long hours worked during the picking season—44 up to Wednesday and 44 after. Should members of the A.W.U. read this, they may declare our Cherries black; well, the black ones are the best.

On those orchards that have not had proper care, the continued dry weather told its tale in the matter of small fruit.

The Apple crop generally is very good. Some interesting comparisons have been made in bandaged and unbandaged trees for the control of codlin; it has been proved beyond a doubt that bandages are an absolute necessity.

Plums, as usual, are hardly worth the picking, and the writers advice is for the growers to agree to grub out 50 per cent. of the trees.

Grapes are of excellent quality, the flavor unsurpassed; evidently the dry season is suitable for this fruit.

The Pea-growing industry is booming; 107,000 bushels were dispatched by train in four months, and given favorable weather, March, April and May should far outstrip the previous four months.—L. Thompson, Orange.

### Cherries and Peas at Orange.

**Orange.**—The production of both Cherries and Peas in the season just closed was very considerable. A comparison of figures shows an increase of 46,871 cases of Cherries and 4,515 bags of Peas over the similar figures of the previous season. The figures for 1925-26 were:—

Cherries.—312,415.

Peas.—53,859 (two-bushel bags).

Totalling 107,718 bushels.

## ORANGE FRUITGROWERS' CO-OPERATIVE SOCIETY.

### A Successful Enterprise.

The first half-yearly general meeting of the Orange Fruitgrowers' Rural Co-operative Society Limited, was held on February 27, when about 50 shareholders were present. Mr. R. H. Greene, the President, occupied the chair. He said that the result of the eight months' trading to December 31, 1925, was a net profit of £639, the turnover amounting to £10,500. Taking everything into consideration this was satisfactory.

Mr. A. Tonking said the figures reflected a splendid position for such a young firm.

Mr. J. J. Griffiths stated that an argument often used by growers against a co-operative society was that in a lean year they would derive no profit. But the speaker contended that if shareholders would leave all their profits in the society, when a bad season came, they would secure enough benefits from the company to see them through. He said the members should not value it from the money which they obtained from it, but by the service they received. It was only by the patronage of all the orchardists that it would be a real success.

Mr. A. W. Blowes said that the Secretary, Mr. Lewis Thompson, had just told him that all those present at the meeting gave the society their loyal support, which was very gratifying.

Mr. F. Brooks, of Millthorpe, was pleased to see that the efforts had been so successful. As it was only a new venture, the balance sheet was an eye-opener. A great deal of the profit had been due to the untiring work of Mr. Lewis Thompson, and he thought that some assistance would soon have to be afforded this energetic official. From a financial point, the company should be able to carry on and extend, at the same time rendering a great service both to the shareholders and the community in general.

Mr. Nancarrow said every grower was very well satisfied with the turnover, and the excellent work done by the secretary and his staff.

Mr. A. W. Blowes stated that the construction of the siding was going ahead as well as could be wished, and when it was finished it would be one of the finest in Orange.

## GRIFFITH IRRIGATION AREA.

Prune and Sultana growers have had a bad time as a result of the excessive rains, large quantities of these fruits being still on the drying trays and racks. As a result, several of the growers are considering the erection of farm dehydrators as an insurance against similar conditions in future seasons.

The Producers' Company have called for tenders for the supply of 1926-27 season's canning fruits at prices not less than last season's. Unless conditions are particularly favorable, a reduction in tonnage is expected, as a large number of Peach orchards are in the Beelbangera Section of the Area, where many farms are being condemned by the Classification Committee, which is at present conducting an investigation into the position of soldier settlers.

## PERSONAL.

At a meeting of the Murrumbidgee Progress Association, held on May 4, a motion was passed conveying the regards of members and their best wishes for his speedy recovery to Mr. J. G. Youll, who was temporarily absent owing to illness. The President, Mr. Crase, said that the Association and townspeople generally had always had a good friend in "Jimmy" Youll, even if they were only realising it now that he was away. There were other expressions of good-will and the motion was carried unanimously.

## WORLD'S SUGAR PRODUCTION.

The British Empire Producers' Association has expressed serious concern because of the world over-production of sugar, which amounted to 1,500,000 tons in 1925.

Despite the fact that Cuba will reduce her next crop by 10 per cent., the growers' outlook continues serious owing to the increasing production of beet sugar in Europe and America.

The Sugar Beet crop for Europe is placed at 8,181,000 short tons. France is expected to produce 832,000 short tons; Germany, 1,775,000; Czechoslovakia, 1,709,000, and Belgium, 375,000 short tons. The Cane and Beet sugar for 1925-26 for 13 European countries and the United States is placed at 7,918,494 short tons.

We place your Fruit  
on the markets of  
BRITAIN direct.



FOR PROFITABLE  
RESULTS —  
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SABLON 17, ANTWERP  
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H. JONES & CO. Ltd.  
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#### SOUTH AUSTRALIA:

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Worando Buildings,  
Grenfell St., Adelaide

#### WESTERN AUSTRALIA:

PATERSON & Co. Ltd.  
E.S. & A. Bank Chambers,  
Perth

#### NEW ZEALAND:

J. A. REDPATH & SONS  
Ltd.  
181 Cashel Street, Christchurch  
17 Johnston Street, Wellington  
Hellaby Buildings, Queen Street,  
Auckland  
And Dunedin



## South Australia.

### Interesting News Items : Fruit Export.

Mr. G. Quinn, Government Horticultural Instructor, South Australia, writes as follows:—

Relative to fruit export from this State, I desire to advise the shipping of the following lines up to April 25:—

Exports up to April 25, 1926.

London.—Apples, 236,441 cases; Plums, 6,170; Nectarines, 2; Pears, 2,635; Grapes, 170.

India and East.—Apples, 1729; Grapes, 25.

Germany.—Apples, 17,320. Africa.—Apples, 500. Denmark.—Apples, 186. Sweden.—Apples, 1,883. Norway.—Apples, 1,127. Belgium.—Apples, 1507; Pears, 212.

We anticipate before the season closes the number of cases will be well past the 300,000 mark, which will constitute a record for this State. The fruit on the whole has been much below the average size for most varieties, but freer from blemishes than usual, although codlin moth has proved highly troublesome to packers. It has been well colored and hard, and should stand up to the journey well.

### MURRAY VALLEY NOTES.

Pruning commenced when the early frosts caused the leaves to fall. In some orchards and vineyards the pruning operations are well advanced.

Ploughing in of cover crops has already commenced, for where the crops were sown early, the timely rains brought the plants on quickly.

Ploughing operations should be thorough, little value can be claimed for merely scratching the soil in the Murray Valley Irrigation Areas. The summer heat is intense, consequently surface roots plants suffer from heat and lack of moisture.

Deep ploughing encourages deep rooting of the plants, thus the moisture is taken further into the land, which is cultivated deeply, and is retained to a large degree, the roots have not only a large water supply, but a bigger feeding area.

The contention that citrus trees are shallow rooted is only partly true. They are shallow rooted and surface feeders where the cultivation is shallow, but where the cultural operations are deep the roots are found further down in the soil.

Mr. W. V. West has been appointed Secretary of the South Australian Fruitgrowers' and Market Gardeners' Association.

## SHIP YOUR FRUIT TO Gerald Da Costa



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**Floral Hall, Covent Garden,  
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all kinds of English, Colonial  
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Spitalfields Market, E.1., and 54 Brushfield Street, E.1.  
Telephone: Avenue 3804.  
Telegrams: "Spitacost, London."  
Apple Warehouses:  
Church Passage, Spital Square, London, E.1.  
3, 4 and 5, The Arcade, Borough Market, London, S.E.1.  
Telephone: Hop, 3373.  
Telegrams: "Borocost, London."  
G.N.R. Potato Market, King's Cross, N.1.  
Telephone: North 1482.  
Telegrams: "Kincrocost, London."  
13 & 17 Victoria Street, Liverpool.  
Telephone: Central 888.  
Telegrams: "Geracost, Liverpool."  
(Facing Commercial Sale Rooms.)  
Deansgate, Manchester.  
Telephone: Central 7156.  
Telegrams: "Geracost, Manchester."  
17, Humber Street, Hull.  
Telephone: Central 4041 Y.  
Telegrams: "Geracost, Hull."  
Southampton Docks, (Facing No. 45 Shed).  
Telephone: Southampton 2610.  
Telegrams: "Geracost, Southampton."  
Eclipse Yard, Westgate, Mansfield.  
Telephone: Mansfield 440.  
Telegrams: "Geracost, Mansfield."

### NEW PEAR STOCK.

Fruit breeders at the State Experimental Station at Geneva, U.S.A., are sponsoring two Pears which were recently developed on the station grounds in the belief that the new sorts may be highly resistant to blight in addition to other excellent qualities. The new varieties have been named Phelps and Pulteney, and a limited quantity of planting stock is available at cost of production for fruit growers who care to give the new Pears a trial.

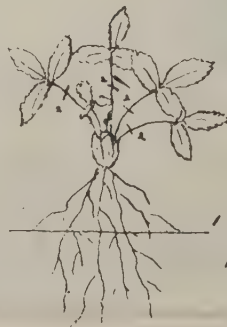
Stocks of two other good Pears are also available for distribution by the New York State Fruit Testing Co-operative Association which propagates the new varieties of fruit developed by the station fruit breeders and distributes them at cost to interested fruitgrowers. These are Gorham and Cayuga.—"American Nurseryman."

### STRAWBERRY CULTURE.

In a recent address before the Stirling Branch of the South Australian Agricultural Bureau, Mr. G. Probert stated that English varieties of Strawberries were not grown successfully in Australia, because they did not carry sufficient foliage to protect the fruit from the rays of the sun. For general purposes he favored Melba, for commercial growing the Billabong, and for private gardens the Ettersburgh.

The life of the Strawberry plant was three years. The plants should be set out in rows 2ft. 6in. apart and 1ft. in the rows. In regard to manuring, Mr. Probert advised using a mixture of two-thirds bone dust and one-third lime.

He also stated that when a Strawberry was washed it lost its flavor. In the discussion that followed, Mr. Noble inquired how long it took seedlings to bear fruit, to which Mr. Probert replied one year. The following varieties of Strawberries were tabled by Mr. Probert:—Ettersburgh, White Alpine, Pink Chilian, Scotch Giant, Gandy, and Billabong.



- (b) Runners showing.  
(1) Method of trimming roots.  
(2) Method of trimming old leaves before planting.  
(c) Depth at which to plant.



SCHLOESING'S READY MIXED

**BORDEAUX SPRAY MIXTURE**

(Guaranteed to Contain from 50 to 56 per cent. Copper Sulphate)

An Absolute Preventive for Downy Mildew of the Vine, Curly Leaf and Brown Rot of the Peach, Shot Hole of the Apricot, and Cure for Black Spot of the Vine, Apple and Pear, Blue Mould on Oranges, Sleepy Sickness of Tomato (Tomato Wilt), Mildew on Roses, Black Spot on Carnations (if sprayed as spots crack), and other Fungus Diseases.

Schloesing's Mixture has been in use in Europe for about 30 years, and has the advantage of doing away with the large amount of labour necessary in preparing the ordinary Bordeaux Mixture. It does away with the necessity for—

1. A stock mixture of Bluestone.
2. A supply of lime milk.
3. Mixing the two in proper proportions.
4. Testing with paper for acidity, etc., as it is slightly alkaline.
5. Straining, as there is no grit in the material.

Do not add anything for "Sticking" purposes, **THE MIXTURE WILL "STICK" ITSELF.**

Schloesing's Mixture has achieved remarkable success in N.Z. and Tasmania, where large quantities of it are used.

Many testimonials have been given as to its efficacy, and above all, it is the ease with which it is used which recommends it to growers.

Dear Sirs,— Cygnet, Tas., 10th April, 1926.

I have used your Spray Powder for Black Spot, and can highly recommend it as it has given me every satisfaction.

I have given your traveller an order for 2 c/s for next season.

Yours truly, (Sgd.) I. D. WYLIE.

Dear Sirs,— Cradock, Tas., 27th March, 1926.  
Please order for me 2 c/s of the Schloesing's Bordo for Black Spot.

I used it last season, and found it to be quite as efficacious as the old Bordeaux Mixture, and much more easily mixed.

Yours truly, (Sgd.) JOHN BRYCE.

Sole Agent for Victoria:

**LAWFORDS FRUIT EXCHANGE**

Pty. Ltd.

**DONCASTER**

Vic.

**BROWN SPOT OF PASSION-FRUIT.****And Measures for its Control.**

This disease is due to the presence of a fungus parasite (*Gloeosporium fructigenum*) which attacks the leaves, stem, shoots, and fruit. The disease may become serious during a spell of rainy weather, or when heavy night dews are followed by warm days (states the N.S.W. Department of Agriculture).

The symptoms are first evident on the leaves and shoots. On the leaves small circular brown spots appear; these gradually enlarge and may become more or less irregular in outline. A dark green border, which later turns dark brown, develops round the spots, and this band surrounds a central area of light brown, dead tissue, while in the centre of the area there is usually a small white or greyish spot.

In the older stages this dead tissue may be considerably cracked. On the stem, the disease appears in the form of more or less elongated discolored spots, which, as the disease progresses may open up and form cankers in which the underlying woody tissue is

exposed. In some cases the laterals are completely girdled, resulting in the death of the parts above the girdle. Shoots often affected wither and die back.

The condition first appears on the fruits in small somewhat sunken brown spots with concentric markings. As the disease progresses the skin becomes parchment-like, and the fruits shrivel and drop.

Although attempts have been made to control the disease by spraying, no programme has ever been satisfactory because it is practically impossible to apply the spray to all parts of a vine in luxuriant growth.

Vines should not be planted too closely, and although the planting distances will depend largely on local conditions, they should be such as to permit as much open growth as possible.

Air drainage is an important factor, and it has been noted that plantations in somewhat exposed positions are less affected by the disease than are those in sheltered situations.

In all cases the diseased fruit and prunings should be removed and destroyed, as otherwise they provide a constant source of infection for the developing vines and fruits.

**"A NEW COVENT GARDEN."**

A meeting, presided over by Sir Arthur Wheeler, Bart., was held in London recently between the directors of Beecham Estates Ltd., who are the owners of Covent Garden Market, and a Committee of the Covent Garden Tenants' Association, consisting of Major Monro (president of Association), Captain Lindsay Forbes, Mr. R. R. Robbins, and Mr. George Corner (solicitor and secretary to the Association).

The directors announced their decision to apply for powers to remove the market to the site and grounds at present occupied by the Foundling Hospital in Bloomsbury, which was situated, as the crow flies, within one mile of the present Covent Garden.

Sir Arthur du Cros, Bart., one of the recently-elected directors of the company, to whose initiative the project is due, described the advantages of the proposed transfer alike to the home and Dominion growers, the market tenants and the public as a whole

—"Fruit, Flower and Vegetable Trades' Journal," England.



## Fighting Insect Pests in the Orchard

### Seasonable Advice.

#### CODLIN MOTH.

Remove all loose bark from Apple trees, and destroy larvae and pupae of this moth.

Bands should be removed and dipped into boiling water, and then replaced on trees. These should be examined every few weeks for insects.

Fruit sheds and packing sheds should be thoroughly sprayed with lotol, kerosene or boiling water to destroy hibernating larvae and chrysalids.

Fruit cases should be dipped into boiling water to destroy insects.

All bags used in connection with packing of Apples should be dipped in boiling water or destroyed. The larvae of Codlin Moths will make their cocoons in the folds of bags, so do not leave bags about packing sheds.

## PEDIGREE FRUIT TREES

### CITRUS

APPLES, APRICOTS, PRUNES,  
PEARS, PLUMS, PEACHES, etc.

### QUALITY PRIME

Correspondence Invited  
Orders Being Booked  
Send for Our Catalogue  
The Most Up-to-date  
in Australia

**F. Ferguson & Son,**  
Australian Nurseries,  
Hurstville, N.S.W.

#### "Painted Apple Moth" and Light-brown Apple Moth.

See "Fruit World," March, 1926, p. 130.

**Bryobia Mite, Red Spider, Woolly Aphis,** see "Fruit World," March, 1926, p. 130.

A remedy that has proved effective against **Red Spider** is made as follows:—Flowers of sulphur, 1oz.; laundry soap, 2oz.; water, 1 gallon.

#### White Ants (Termites).

These destructive insects appear to be on the increase in Apricot and Plum trees. The trees are usually attacked just under the soil. Remove the soil around the trees, and work Clift's Manurial Insecticide into it. Soot and lime with tobacco dust added are also recommended.

#### The Cherry and Plum Tree Borer.

At the present time the caterpillars of this very destructive insect are to be found in many orchards. For remedies, see "Fruit World," April 1st, 1926, p. 201.

#### Peach Aphids.

Spray trees to destroy eggs of these destructive insects. Lime-sulphur in winter is recommended.

#### The Orange Aphids.

These destructive little insects are now very numerous in many citrus orchards. They swarm in great numbers around the young shoots, sucking the sap, which causes the twigs to turn black. A reliable re-

medy will be found in the nicotine sulphate or black-leaf 40 sprays.

#### San Jose Scale.

This scale is round, flat, greyish in colour, resembles the bark of a tree, and has a golden dot in the middle. The infested fruits, Apples and Pears especially, when attacked become reddish coloured around the scale.

Remedies: Fumigation; spraying with red oil in winter, lime and sulphur in summer. Burn all prunings.

#### Red Scale of Orange and Lemon.

The adult female is circular in form, and when fully matured, is of a rich golden colour. There are several other species of scale insects affecting citrus fruits in Victoria, viz.:—Orange and Lemon Mussel Scale, Brown Scale, and Black or Olive Scale. All these scales discharge the honey-dew, which causes the upper part of the leaves to become smothered with a sooty fungus.

Spray trees during summer and autumn with red oil. Fumigate with calcium cyanide or hydrocyanic acid gas. When young scales are moving, use tobacco water.

One city man called upon another, and after a glance round the office, inquired:

"How's your new office boy getting along?"

"Fine!" was the reply. "He's got things so mixed up that I couldn't get along without him!"

Those people who think that money is plentiful should be sent out collecting bills.

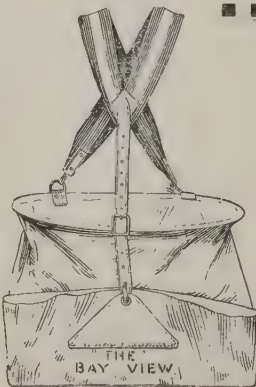
A man had been taken to the hospital wounded in the head.

"How did this happen?" asked the surgeon.

"My wife threw a stone and hit me," murmured the patient.

"Well, that's the first time I ever heard of a woman hitting what she aimed for!"

"Oh, she didn't aim at me, doctor! She threw the stone at our neighbor's cat, and I was standing behind her?"



## "Bay View" Fruit Picking Bag

CAN BE USED FOR ANY CLASS OF FRUIT

Allows use of Both Hands in Picking.

No Bruising of Fruit.

Weight Carried on Shoulders instead of Back of Neck.

MR. J. LANG, President of the Australian Conference of Fruitgrowers, writes:—"After two season's use, I am well pleased with Bags; fruit receives the minimum of handling, and is less liable to damage. They are also a great time saver."

Price 12/6 each

Postage extra, one bag, 1/-; two, 1/9

F. R. MELLOR, 440 Elizabeth St., MELB.

# Australian Commonwealth Line of Steamers

Regular four weekly fast Passenger and Cargo Service between  
United Kingdom and Australia, via Suez and Colombo.

## ONE - CLASS PASSENGER SERVICE At Lowest Fares to London via Suez Canal

SPECIAL ACCOMMODATION FOR REFRIGERATED CARGO.

Loading Homewards at Australian Ports, taking Wool, Fruit, and  
Refrigerated and General Cargo at Lowest Current Rates.

Full Particulars, apply to:—

### Australian Commonwealth Line of Steamers

SYDNEY—BRISBANE—MELBOURNE—ADELAIDE—FREMANTLE.

Agents:—All other Australian Ports. London:—Australia House, Strand, W.C.2.

#### ORCHARDISTS . . .

The

### ELLIS FRUIT GRADER

For all Classes of Fruit.

PERFECT GRADING - - NO BRUISING

A WISE BUYER makes sure that he buys the BEST  
See the ELLIS before ordering elsewhere

Hundreds of other Fruit Growers are now using it.  
Write for their Testimonials

Mildura Co-operative have now installed their  
FOURTH, saying—  
"Your Machine is the best yet introduced to us."

One great advantage of this Grader is that the  
fruit simply rolls on to your packing table and will  
keep eight packers busy. No second handling by  
carrying of fruit from grader to packing table.

**ELLIS FRUIT GRADER CO.**  
(E. W. GREENWOOD)

Corner Elizabeth and a'Beckett Sts., Melbourne  
Or H. F. GREENWOOD, Merrigum, Vic.

#### Concentrated Tobacco Extract—

is recognised by scientists and practical  
growers to be the best and most economical  
specific against APHIS and many other  
kinds of Fruit and Vegetation Pests

The Most  
Reliable  
Tobacco  
Spray IS—

**"INSECTO"** Highly  
Concentrated  
Wonderfully  
Effective  
SULPHATE OF NICOTINE

Manufactured in Australia for Australian conditions  
by the makers of the well-known "Harbas" Red  
Spraying Oil, "Harola" Lime Sulphur, "National"  
Bordeaux Powder, etc. etc.

**A Trial will convince you.**

We state definitely there is no  
need to use an imported product.

**"INSECTO" has**  
QUALITY Right and PRICE Right and is Australian  
Made.

Full Particulars from

**ESMOND RUSSELL**  
60 Queen Street . . . Melbourne



# The Fruit Trade

## Market Reports and News Items.

**REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS, Advertising in this Journal.**

### NEW SOUTH WALES.

#### Sydney.

Chilton, F., City Fruit Markets.  
Greenberg, S. & M., Fruit Markets.  
Jenkins, John, Fruit Exchange.  
Louey Pang & Samuel Wong Ltd.,  
Thomas St., Haymarket.  
Rule & Beavis, Fruit Exchange.

### VICTORIA.

#### Melbourne.

Coastal Farmers' Co-op. Society, Western Market.  
Cave, F. & Co., Melbourne.  
Davis, J., Western Market.  
Dennys, Lascelles Ltd.  
I.F. & M. Co. Ltd.  
Lister, G., Western Market.  
Mills, A. & Sons, Western Markets.  
Mills, J. B. & Co., 9 Queen St.  
Mumford, J. G., 449 Flinders Lane.  
Pang & Co. Ltd., H. L., Little Bourke Street.  
Silbert, Sharp & Davies, Western Markets.  
Stott & Son, T., Western Markets.  
Tim Young & Co., Western Market.  
Vear, F. W., 49 William Street.  
Wade & Co., H. M., 471 Flinders Lane.  
Woollf, G., Western Market.

### QUEENSLAND.

#### Brisbane.

Barr, A. S., Fruit Exchange.  
Collard & Mackay, Fruit Exchange.  
Cooksley & Co., Fruit Exchange.  
Finlayson & Son, Fruit Exchange.  
Geeves, H. V., Fruit Exchange.  
Robsons Ltd., Fruit Exchange.  
W. J. Whitten & Co., Fruit Exchange.

### TASMANIA.

#### Hobart.

Jones & Co. Ltd., H., Fruit Exporters.  
Port Huon Fruitgrowers' Assoc.  
Peacock & Co., W. D., Fruit Exporters, and at London.

#### Launceston.

Bender & Co. Pty. Ltd., 110 Elizabeth Street.

### WEST AUSTRALIA.

#### Fremantle.

Simper, H. J. & F. Ltd.

### SOUTH AUSTRALIA.

#### Adelaide.

Silbert, Sharp & Bishop Ltd.

### NEW ZEALAND.

#### Auckland.

Turner & Growers Ltd., City Markets.

#### Dunedin.

Co-operative Fruitgrowers' of Otago Ltd.  
Paterson, Thos. & Co., Vogel Street.  
Reilly's Central Produce Mart.

### ENGLAND.

#### London.

Dennis & Cooper Ltd.  
Jacobs, E., & Sons, Covent Garden  
Joel, R., & Sons, 16, 17, 20 Russell St., Covent Garden.  
Margetson & Co. Ltd., Covent Garden.  
Monro, Geo., Ltd., Covent Garden.  
Ridley, Houlding & Co., Covent Garden.  
Springer, Barney.  
Swann & Co., 3 Salter's Hall Court.

#### Full.

White & Son Ltd.

#### Coventry.

Boswell Bros. & Davis.

#### Manchester.

North of England Fruit Brokers Ltd.,  
—Australasian Agent, N. V. Wade, 3  
Bridge St., Sydney, N.S.W.

### GERMANY.

#### Bremen.

Fruchthandel, Gesellschaft.

#### Hamburg.

A. Reimer, P. H. & Son., Fruchthof.  
Lutten, J. H. & Co., Hamburg.  
Stier, Aug., Fruchthof, Reps. J. B. Mills  
& Co., 9 Queen St., Melbourne.

## British and Australasian Market Reports.

### Effect of the Strike.

During the recent general strike in England, the fruit industry was seriously handicapped. Vessels from Australia and New Zealand were arriving without any possibility of discharge. This meant a large accumulation of fruit in London. However, the fruit which arrived at Liverpool, when discharged, was sold at satisfactory prices; 110,000 cases were sold at two auctions. In London the prices were not so satisfactory, as there was a larger quantity assembled there. However, it seems there is a possibility of the season eventually turning out with moderate success, as it is understood the demand is gradually improving, and for good quality fruit good prices are expected to be realised towards the end of the season.

The general strike was a failure, and it is recognised now as useless as a weapon in industrial strife. Some Labor leaders have frankly stated that the general strike has undone much of the good work for the past 50 years.

### LONDON FRUIT SALES.

London (29/4/26).

The Australian fruit, per "Euripides" and "Medic" realised the following prices at Liverpool:—Pears, trays, W.A. Josephine, 5/- to 6/-; cases, Tasmanian Bosc, 18/-; Cap., 13/9; half cases, Napoleons, 7/3; Williams, 5/9. Grapes, W.A., 10 lb. boxes, Wortley Hall, white, 11/6; black, 14/-; 33 lb. cases, Red Prince, 25/-.

### STRIKE AFFECTS BUSINESS.

London (3/5/26).

Apples met with a brisk sale owing to buyers' anxiety to get delivery of fruit before the railways stop. The "Tainui's" shipment of N.Z. fruit was rather overripe, and mostly sold at 11/- to 14/- per case. Cox's, wasty, 10/- to 12/-. The "Asphalion's" Tasmanian fruit, Cox's, were overripe, and realised 9/- to 11/-; best, 12/- to 13/-; N.Y.P., 12/6 to 14/6; King Davids and Jons., 10/6; Munroe's,

11/- South Australian, 11/- to 16/- Western Australian, 12/- to 15/- The "Osterley's" W.A. Grapes, Ohanez, brought 19/- to 19/6; Black Malaga, 18/-; Red Prince were wasty, and sold at 10/-.

Further sales of the "Pt. Caroline's" and "Delphic's" fruit have been made to Hamburg as follow:—W.A. Cleos., 13/- to 17/-; a few 20/-; Dunn's, 14/- to 18/-; Jons., 11/- to 17/-; Victorian Cleos., 14/- to 16/6; Jons., 11/- to 15/6; Dunn's and Munroe's, 13/- to 16/-. Western Australian Pears, cases, Bosc, realised 22/- to 33/-; Vicar, 11/6 to 18/9; Grapes, Red Prince and Wortley Hall brought 17/6.

### FURTHER SALES TO GERMANY.

London (12/5/26).

The balance of the "Port Caroline's" and "Delphic's" shipments of Apples has been sold at Hamburg. W.A. Cleos. realised 12/9 to 19/6 per case; Dunn's, 13/9 to 21/6; Jonathans, 12/9 to 15/9; Victorian Cleos., 11/9 to 15/9; Dunn's, 12/9 to 15/9; Munroe's, 11/9 to 14/9; Jons., 9/9 to 15/9; others 8/9 to 12/6.

London (19/5/26).

About 20,000 cases of Apples from the steamers "Comorin" and "Bal-larat" have been sold in the city. Tasmanian Cox's realised 12/- to 13/- per case; New Yorks, 12/- to 12/6; others, 9/6 to 11/-; W.A. Cleos., 13/- to 14/6; Jons., 11/- to 12/6; Rome Beauty, 12/- to 12/6; Dunn's, 14/- West Australian Pears, cases, Winter Nelis, 16/- to 18/6; Keiffer's, 12/-; Vicar, 14/6; Bartlett, 16/-; trays, Josephine, 5/- to 6/- W.A. Grapes, three-quarter cases, Ohanez, 16/- to 17/6; Black Malaga, 17/- At Hull, sales of the "Otitra's" shipment of New Zealand fruit were made at the following rates:—Jons., 10/- to 11/9; Cox's, 14/6 to 16/8; Delicious, 11/3. The "Port Brisbane's" shipment of W.A. Cleos. brought 8/- to 13/9; Dunn's, 10/- to 12/6; Rome Beauty, 10/9; others, 7/6 to 8/6. Victorian Cleos., 12/9; Munroe's, 10/- to 10/6; others, 8/3 to 10/6.

London (20th May).

Of the "Port Dunedin's" shipment of Tasmanian Apples, 22,000 cases were landed at Liverpool, and there was an active demand following the recent absence of supplies. Cleos. realised 12/- to 17/- per case; Jon., 10/3 to 15/6; Cox's, 9/- to 15/6; Munroe's, 11/3 to 14/6; Dunn's, 12/3 to 15/-; French Crabs, 11/6 to 15/-; others, 9/3 to 14/6. Pears, half cases, Bosc and Winter Nelis brought 11/6; Clairgeau, 8/3 to 10/3; Napoleon, 6/6 to 7/6; Winter Cole, 6/3 to 8/-; Vicars, 5/9 to 6/-.

**Tasmanian Apples.**

"The Age," of May 13th, stated:—One of the largest shipments of Apples for overseas is that now on its way to England in the holds of the "Jervis Bay," which sailed from Melbourne last night. The shipment comprises 87,803 cases of Apples, and also 1,035 cases and trays of Pears, which will be landed at London.

**Dried Fruits in London.**

London, May 6.

Satisfactory prices are being obtained for Australian Sultanas. In the week which ended on May 1, 26 tons were sold at the average price of £63/3/- a ton, the lowest price being £60, and the highest £65. Currants, of which 238 tons were sold, were on the average £24/9/- a ton, and Lexias £19/10/- a ton.

Sales of Australian dried fruits in London since the opening of the 1925 season in May, 1925, have been officially recorded as follow:—

Sultanas.—512,652 boxes (12,816 tons); average price, £68/3/- per ton. Currants.—251,749 boxes (6,293 tons); average price, £31 per ton.

Lexias.—127,209 boxes (3,180 tons); average price, £32 per ton.

Including in these sales were the following during the period 7th May to 13th May:—

Sultanas.—90 boxes (2 tons), at 68/- per cwt.

Currants.—200 boxes, at 21/- per cwt.; 400 boxes, at 22/- per cwt.; 530 boxes at 23/- per cwt.; 50 boxes, at 24/- per cwt.; 180 boxes, at 25/- per cwt. Total, 1,360 boxes (34 tons); average price, £22/14/- per ton.

London, 20th May.

The first arrivals of new Australian dried fruits were of excellent quality. Appraised values were:—Sultanas, 68/- to 90/- per cwt.; Currants, 40/- to 54/- per cwt. Some sales of Sultanas were made at from 68/- to 83/-, and Currants at from 41/- to 53/- per cwt.

**AUSTRALASIAN MARKETS.****Victoria.**

Melbourne, May 24.

The following were the ruling wholesale quotations at Western Market:—Apples—Good to choice eating, 4/6, 8/-; good to choice cooking, 4/-, 7/-. Bananas—Queensland, 20/-, 28/-, double. Grapes—Doradillo, 7/-, 8/-; Ohanez, 12/-, 14/-. Lemons—Victorian, 10/-, 14/-. Mandarins—Queensland, 16/-, 18/-. Oranges—Queensland, 12/-, 14/-; Navels, 12/-, 17/-. Passion-fruit—Victorian, 24/-, 32/-. Pears, 3/-, 7/-. Pineapples—Queens, 12, 15/-, double. Quinces, 3/-, 3/6. Tomatoes, 5/-, 9/-.

**South Australia.**

Adelaide, May 15th.

Apples, eating, 6/- to 7/- case; cooking, 5/- to 6/-; Grapes (dark), 7/-; Lemons, 8/- to 9/-; Oranges (common), 11/- to 12/-; Passion-fruit, 35/-; Pears, cooking, 9/- to 10/-; eating, 11/- to 12/-.

**Queensland.**

Brisbane (18/5/26).

Apples, eating, prime, 9/- to 11/- case; others, 4/- to 6/-; Lemons, prime, 4/- to 5/-; others, 3/6 to 4/- a half-case; Mandarins, 12/- to 16/-; Oranges, 7/6 to 10/- bushel case; Navels, 15/- bushel case; 6/- to 7/- ½ case; Passion-fruit, prime, 9/- to 12/-; others, 4/- to 6/- ½ bushel case; Pineapples, rough leaf, prime, 5/- to 7/-; others, 2/6 to 5/- dozen, 7/- to 11/- case; green, 7/- to 9/-; smooth leaf, prime, 7/- to 8/6; others, 5/- to 7/- case, 5/6 to 7/6 dozen.

**Western Australia.**

Perth, (8/5/26).

Jonathans, prime dumps, 10/- to 15/- case; flats, 5/- to 7/6; Dunn's, prime dumps, 8/- to 10/6; flats, 4/6 to 7/6; Cleos., prime dumps, 7/- to 12/-; flats, 4/6 to 7/-; Granny Smiths, prime dumps, 8/- to 10/6; flats, 6/- to 8/-; Delicious, prime dumps, 8/- to 12/6; Yates, 7/- to 14/-; flats, 5/- to 8/6; Rome Beauties, prime dumps, 7/- to 9/-; Doherty, dumps, 7/6 to 12/-; Pears, dumps, 5/- to 9/6; flats, 5/- to 8/-; Oranges, Navels, 7/- to 13/6; Lemons, flats, 3/- to 6/-; Passion-fruit, flats, 38/6.

**Tasmania.**

Hobart, (15/5/26).

Apples, Jonathans, choice to 6/- case; fair, 4/3 to 4/7; Democrats, good, to 7/1; fair, to 6/-; S.P.M., good, to 6/-; medium, 5/- to 5/7; Del., good, to 6/3; fair, to 5/9; C.P.M., fair, to 5/-; P.A., good, to 4/3; N.Y.P., fair, to 4/3. Pears—W.N., good, 3/6 ½ case; Napoleons, to 3/3 case; W.C., 2/6 to 5/6.

**New South Wales.**

Sydney (25/5/26).

Mr. F. Chilton, City Fruit Markets, Haymarket, Sydney, reports on 25th May as follows:—

Queensland Fruits.—Bananas, 18/- to 30/- case; Pines, smooth leaf, 10/- to 15/-; Custard Apples, 4/- to 7/- ½ case; Tomatoes (Nth. Qld.), 9/- to 18/- ½ case. New South Wales Fruits.—Bananas, 18/- to 32/- case; Lemons, yellow, 8/- to 14/- bushel case; green, 6/- to 10/-; Oranges, Siletta, 5/- to 10/-; Navel, 9/- to 14/-; Mandarins, Emperor, 8/- to 15/-; Eating Apples, Jon., 6/- to 9/-; Londons, 4/- to 9/-; R.B., 5/- to 10/-; Del., 5/- to 9/-; Granny Smith, 8/- to

14/-; Pears, Packham's, 8/- to 14/-; Jos., 8/- to 14/-; Quinces, 3/- to 8/-; Passions, 10/- to 20/- ½ case; Grapes, Ohanez, 4/- to 9/-; Persimmons, 2/- to 4/-. Victorian Fruits.—Apples: Jon., 6/- to 8/- bushel case; Pears: Keiffer, 5/- to 7/-; Jos., 9/- to 14/-; B.B., 7/- to 10/-; M.L., 8/- to 11/-; Quinces, 5/- to 7/-. Tasmanian Fruits.—Apples: S.P.M., 6/- to 8/- bushel case; F.C., 6/- to 8/-; Jon., 6/- to 9/-; Cleos., 6/- to 8/-; Del., 6/- to 9/-; Geeveston Fancy, 6/- to 9/-; Pears: W.N., 3/6 to 6/- ½ case; Giblin, 3/- to 5/-; W.C., 4/- to 7/-; Duchess, 3/6 to 5/-.

The past month has seen a considerable shrinkage in the demand for some kinds of fruit, and a reduction in values, almost generally. Apples, especially of small size and medium quality, have been coming forward in excess of market requirements lately, but are meeting with sufficient demand to prevent a glut. Choice quality lines are in good demand. Main-crop citrus fruits are coming to hand from early districts, the quality generally being good. Pineapples are meeting with a moderate demand, and only well colored brands asked for. Growers will be well advised not to forward grass green Pines to this market during the winter months.

**New Zealand.**

Dunedin (6/5/26).

Reilly's Central Produce Market reported very heavy consignments of Apples, and prices low.

Apples: Delicious, 10/-; Cox's, to 10/-; other desserts, to 7/-; choice cookers, to 6/6; others, to 4/-; N.Z. Passions, 9/-; Lemons, Italian bushels, 22/6; Oranges, Italian bushels, 22/6; Raratongas, 17/6; Bananas, ripe, 35/-; Green Suvas, 30/-; Pears: Choice desserts, to 3½d.; others to 2d.; over-ripe, unsaleable cookers, to 2d.; Quinces, 2d. Grapes: Hamburgs, to 2/-; Gros Colmars, to 2/9.

**QUEENSLAND.****Growers Criticise C.O.D.**

At a recent meeting of Banana growers at Gympie, Queensland, the Committee of Direction was adversely criticised.

With regard to the C.O.D. generally, support by the growers in Queensland has been gradually alienated by compulsory methods and procedure, which is deemed to be unbusinesslike, including the retaining of rebates on freight. The recent attempt to run barrows in Brisbane was a failure.

In marked contrast is the success of the Bowen fruitgrowers' organisation, which is not under C.O.D. control.





## A Poultry Owner "boosts" Karswood but says she can't "boost" it enough

WHEN one is so satisfied and so appreciative of the excellence of an article that in that individual's opinion one's tribute of praise is considered insufficient and inadequate, there must be outstanding merit in the products. Such an instance is here definitely evidenced. Miss M. Short, of Manly, though having previously expressed her appreciation of Karswood Poultry Spice (which contains dried and ground insects) again expresses her appreciation of the results of this wonderful poultry food-tonic. We quote below her testimonial, in which she says, amongst other eulogistic remarks, that Karswood deserves a better boost than she can give it—yet she is quoting actual results.

### No One Ever Gave It Up.

Dear Sir,—

In reply to yours of the 24th, you are free to use mine of the 20th as a testimonial, though Karswood deserves a better "boost" than I can supply. I induced several people to acquire the Karswood habit; they also passed it on to others, and no one ever gave it up after a trial. My experience in breeding shows stronger chickens hatched when the foundation stock are Karswood birds. It brings hens through the moult in better condition. Karswood produces an atmosphere of contented brightness in the fowlyard—how is that for a slogan for you? it is true, every bit.

(Signed) MISS M. SHORT.

Corrie Road, North Manly.

### Best of Them All.

Dear Sir,—

Would you kindly forward to me one two-shilling packet of Karswood Poultry Spice, as my fowls have been without it one week, and they are going off laying. It is the best of them all. I have tried others, and think they are not worth the cardboard that is around them, to produce eggs.

(Signed) T. H. COLES.

Swan Creek, Ulmarra, N.S.W.

### Satisfied with Results.

I have been a customer of your valuable poultry spice for some 12

months past, and am very satisfied with the results, and it is all that you claim it to be.

(Signed) F. J. STAPLETON.

86 Cascade St., South Hobart.

### Never Had Anything Better.

The packet of Karswood Poultry Spice I procured from your firm some time ago, has given such good results that I am writing to let you know that I never had anything better.

I just got through the last of the spice, and I got a lb. from my grocer.

I had 32 young pullets, and they were sick before they got the spice, and all died. I have only 17 left, and since giving them your Karswood Spice they are going on well. Two of them are laying at five months old.

(Signed) MRS. A. McDONNELL.

Canbelego.

### Fowls Lay Much Better.

Dear Sir,—

I have used Karswood Poultry Spice for some time. I find it very good. The fowls lay much better—especially in the winter, and it keeps them in a healthy condition. You may make what use you like of this letter.—Yours truly,

(Signed) J. HARRISS.

Pakenham.

### It Is Doing Good.

Dear Sir,—

I bought a half-pound packet of Karswood about a week ago, as I was anxious to try it with my fowls,

as they had gone off laying for some time. I am glad to say that it is doing good, and they are now beginning to lay again. I will mention about it to my neighbours, who have fowls, and I hope it will inspire them to give it a trial.—Yours sincerely,

(Signed) F. O'LOUGHLIN.

324 Catherine St., Liverpool, N.S.W.

### 270 Eggs—10 Weeks—8 Hens.

Dear Sir,—

Having bought a 7lb. tin of Karswood Poultry Spice from you to give it a fair trial, I am writing to tell you the results.

I hatched out eight hens and a rooster at the end of the third week in September. I started mixing a little Karswood with their food once a day when they were a month old, and have kept on, according to the directions on the tin, ever since. The eight hens started to lay at 4½ months old, and, up to the present (10 weeks from starting), have laid 270 eggs. This I consider very good for the heat of the summer. I never had such good results before I used the Karswood. The birds look in the pink of condition, and I am very satisfied with the spice.—Yours truly,

(Name and Address on Application).

### Excellent for Poultry.

Please forward me, per mail, as soon as possible, a 7 lb. tin of Karswood Poultry Spice, which is excellent, I find, for poultry.—Yours faithfully,

(Signed) R. BALLARD.

"Clayesmore," Upper Swan, W.A.

### Make This Test.

Go to your local grocer, store-keeper, or produce dealer. Get a 1/- packet of Karswood Poultry Spice, and give it to half-a-dozen of your birds, in accordance with the directions on the packet. Do not expect immediate results—Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

### Note the Economy.

- 1/- packet supplies 20 hens for 16 days.
- 2/- packet supplies 20 hens for 32 days.
- 13/- (7lb. tin) supplies 140 hens for 32 days.

### Supplies.

Karswood Poultry Spice is obtainable from all stores and poultry food suppliers at the following standard prices: ½ lb. packet, Price 1/- 1lb packet, Price 2/- 7lb. tin, Price 13/- 14lb. tin, Price, 25/- 28lb. tin, Price 48/-.

If your local dealer cannot supply you, write direct to Henry Berry & Co. Pty. Ltd., Collins St., Melbourne, adding postage—6d. on ½lb. packets, and 9d. on 1lb. packets—to the above prices.



### POULTRY ON THE FARM.

At Kongorong, South Australia, recently, Mr. W. Aslin, who read a paper dealing with this subject, said the Kongorong district was especially suitable for poultry raising, because the soil was of a sandy nature, and contained a large proportion of grit.

He had tried many breeds of fowls, including White Leghorns, Wyandottes, Barred Rocks, Rhode Island Reds, Black Orpingtons, and after giving them all a fair trial, had come to the conclusion that a heavily feathered, hardy fowl was the best for the district.

Three or four years ago he sold off all the birds except the Black Orpingtons, and bought some cockerels of a proved laying strain, and they had been most profitable. Each year he hatched about 300 chickens, nearly all the pullets were kept and the cockerels sold when they were about six to eight months old, whilst all the hens over two years old were culled.

All hens that developed broodiness after the beginning of August until December, he endeavored to set, because he had found that the best layers only had a short period of broodiness. The fallen needles from Pine trees made excellent nests. The pen should not be disturbed until the chicks had been hatched at least 12 hours, after which they could be moved into a portable coop with a small scratching yard attached, which held the mother but allowed the chickens plenty of freedom.

The chickens were kept in the brooder for a fortnight to a month before they were permitted to roam at large. The small chickens were fed entirely on cracked Wheat, but as the young birds grew, the grain was mixed with Oats and boiled Potatoes, and when time permitted a mash of equal parts of bran and polard could be given. If properly fed and looked after, the pullets would start to lay when they were about five months old, and would keep on right through the winter months. During the cold weather a meat ration was necessary, for which he

used boiled rabbits. Eggs should be gathered at least once a day and kept in a cool place. One rooster was quite sufficient for the ordinary farm flock of poultry, and it should be confined in a yard with from six to nine selected hens. Only medium-sized good-shaped eggs should be set, and any hen found not laying such or with any other fault should be put out of the pen and another one substituted. Plenty of good, fresh water should be provided, and for birds kept in an enclosure, a supply of shell grit was necessary.

**Turkeys could be reared** very profitably in that district. The Bronzewing was the best breed, they matured quickly, and developed into large birds. Great care should be taken with young turkeys, because a sudden cold change killed them very quickly. Pollord mash with greenstuff was the best food for them. Ducks could also be raised profitably, but they were a continual source of annoyance in the stables and about the farm buildings.—South Australian "Journal of Agriculture."

### BEES IN THE ORCHARD.

At a meeting of the Naracoorte Branch of the South Australian Agricultural Bureau, Mr. T. E. Ekers contributed a paper on the subject of "Bees in the Orchard."

It is generally accepted that certain Apples, Plums, and Pears, are capable of self-pollination. It is known also that there are certain wind-pollinated plants—Maize, Hemp, Rice, Wheat, etc.—thereby dispensing with bee service. Freely admitting this, it remains that without the services of bees and other insects our fruit crops would probably be a failure.

Generally speaking, every horticulturist is greatly indebted to their service, and while this has been but partially realised for many years, it is only comparatively recently that the orchardist has made any active effort to derive as much service as possible from the bees, thereby insuring a crop. The horticulturist of to-day, however, is more wide awake than his predecessor of 20 years ago, and

is ready to realise that the honey bee is an agent of service that will help him to secure better results.

**The bee's service** is the result of its effort to secure nectar pollen, which is the male element of the flower. In the search for nectar the male element is transplanted to the stigma, effecting pollination, and, if the elements are correct, fertilisation results.

There are roughly two classes of bees, grouped as the solitary and the social bees. The solitary bees live isolated and single, and are not generally numerous. The other group comprises a number of species that may be generally classified as the common bumble bee and the honey bee. Any of these bees, including the honey bee, may be wild; in fact, we might include all the various kinds of bees as wild, because, although the beekeeper may claim possession to so many colonies of bees, it means that only to a certain extent can be control them.

**Control** becomes an important factor under certain conditions. Considering the vast number of wild insects, it so happens, in well-cultivated localities, that the honey bee generally outnumbers the other wild forms. These honey bees may not come from an apiary under the control of man, but from the forest or scrub. If it were possible to calculate the value derived from the pollination by honey bees alone, the returns would probably far exceed the total income derived from the honey and wax. Thus the honey bee serves in a dual capacity, and is a source of double income.

I will mention some of the more common fruits and vegetables which are in need of the activities of the honey bee. It is generally claimed that bees are very important in the setting of Apple, Pear, Plum, Quince, Peach, Raspberry, Blackberry, Strawberry (although, to a large extent, according to the locality and climatic conditions, the strawberry is wind pollinated), the Mulberry, Pea, Bean, Currant, Melons, Marrows, Cucumbers, and Pumpkins.

It must be borne in mind that season, climatic conditions, and locality are important factors in the activities of the honey bee. It is the beekeeper's business to raise the working strength of the colonies under his control to that stage of activity that is most required at certain periods, so as to catch certain honey flowers, or, as is the case when bees are to be of service in the orchard, that they should be on the spot, and in good order, during the flowering period.

Presuming that there may be no



wild bees within two or three miles of an orchard, as may often be the case, if climatic conditions are not favorable for long bee flights. Very few bees would be able to visit the flowers, and the result would be a poor setting of fruit. But, with a well-conditioned apiary, properly set in an orchard, even a few hours of favorable weather during the flowering period would be quite sufficient to enable the bees to perform the necessary pollination.

When conditions are favorable bees will rise to the crest of prosperity, but when unfavorable conditions set in, as for instance, when a disease appears, they will decline to a very depressed condition. Thus, when most needed by the horticulturist as pollen bearers, they may be either at a low ebb or scarce. The question then arises: How are these fluctuations to be overcome?

I would say,

#### keep bees in the orchard

in the flowering season. It is the job of the beekeeper to control his bees to be of service when needed. By this method only can the horticulturist be sure of the pollination of the flowers. Cases are on record where orchards situated within half a mile of an apiary have been successfully fertilised, while more distant orchards bore smaller or no crops during the same year, the quantity of the crop dwindling as the distance increased. Thus it may be suggested that an apiary advantageously situated in or near an orchard will prevent failure of the crop.

It has been claimed that bees will only work on one class of plant at one time, although they will work on any variety of the same family. That is to say, a bee working on Melons will visit Water Melons, Pie Melons, and so on, but on the same trip will not visit Pumpkins or Marrows. This appears to be a wise provision of Nature to prevent the production of mongrel vegetation.

In conclusion, I would like to say that

bees are often unjustly blamed for spoiling fruit, principally Grapes.

## FRUIT TREES

CLEAN, HEALTHY,  
.. WELL-GROWN ..  
All the Leading Varieties  
Correspondence Invited

**J. W. LAWREY**

Kinglake Nurseries YARRA GLEN, Vic.

What at first sight appears to be damage by bees is in reality the reverse. It has been proved by scientific investigation that bees are physically incapable of puncturing Grapes or other fruit with their mandibles, so therefore they cannot hurt the fruit.

What really happens is this:—Through climatic conditions, over-ripeness, or the attacks of birds, the fruit becomes damaged and the honey bee, seeking nectar finds the juices, and naturally sets to work to collect the sweets of Nature, and, if allowed

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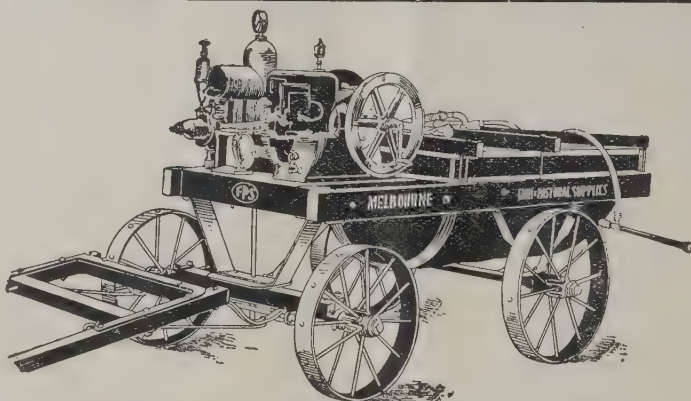
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**Y**OUNG MAN (25), would like position Orchard Work. Expert Packer, Pruner, and all-round man. Good references.

E. W. CURTIS,

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Two guns at full 300 lbs. pressure—this is the achievement of the New HERCULES Sprayer, which consists of a 1½, 2½, or 3½ B.H.P. HERCULES Engine geared direct to a Metters' Power Pump.

If you have a Power Sprayer already, let us quote you for fitting our engine or pump, or both. Write at once for particulars, or apply for a FREE DEMONSTRATION in your own Orchard.

## THE FARM & PASTORAL SUPPLIES

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to, will remove all the juice, leaving only the skins and pips. By so doing the bee renders great service to mankind by removing those juices, which must eventually ferment and possibly become sources of infection.—S.A. "Journal of Agriculture."

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We are the largest Buyers  
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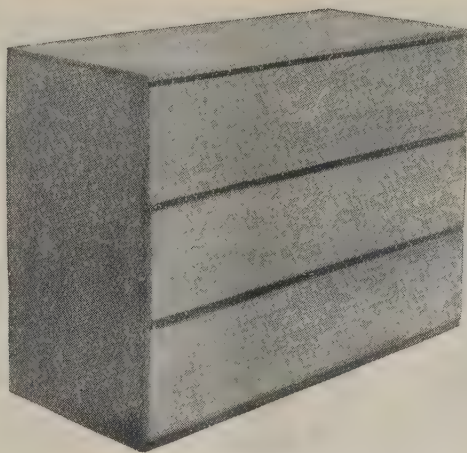
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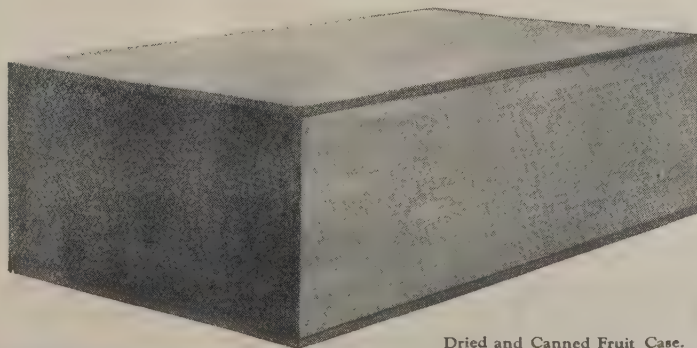
Australian Apple and Citrus Dump Bushel Case.

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- (2) 1/3rd less freight than on Hardwood cases.
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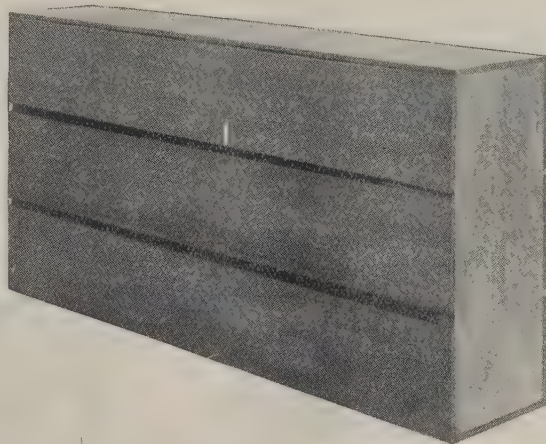
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DUMP BUSHEL with one piece top and three equal piece side

UPRIGHT BUSHEL with one piece top and three equal piece side

DRIED FRUIT CASE with one piece side and two equal pieces tops and bottoms

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Upright Bushel Case with Centre Partition.

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# "HARVEY'S" DOUBLE and THREE FURROW PLOWS

## SUITABLE FOR ORCHARD AND VINEYARD

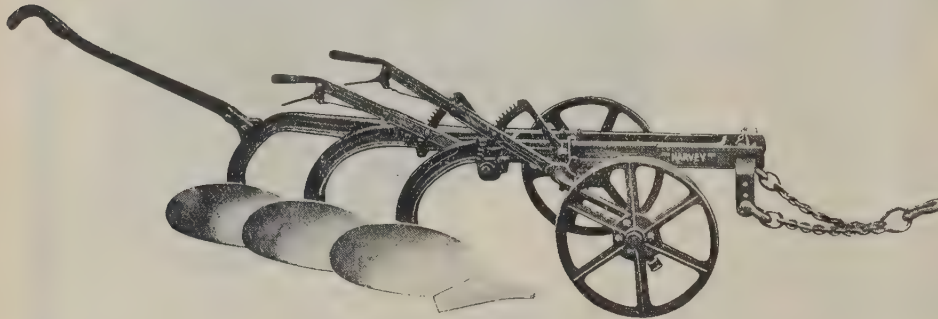
The "Harvey" Double Furrow Vineyard Plow is light, short, strong, and durable, and suitable for two light horses. It is fitted with high channel steel goose-neck beams, and shifting head rack. Means are provided that the draught can be shifted to any point desired, by a double chain pull with grab link, which enables the horses to work to one side when backing off or ploughing on. The draught on the head rack may be raised or lowered, according to the hardness of the ground to be plowed. The land wheel may be set in or out as desired, so that when backing off vines, this wheel is inside the line of the back furrow. The levers are low down when at work, as shown.



Orchard and Vineyard 2-Furrow Plow.  
This Plow is shown with One Handle. Can be converted to Double Handle.

### THREE FURROW PLOWS

The "Harvey" Orchard and Vineyard Three-furrow Plows are supplied with one set of steel Shares, and an extra set of cast. These Plows are superior to any other Plow of their class. They have no cast iron parts, and will plow hard ground. Plenty of room is given between the front furrow wheel and Mouldboard. It is impossible to choke the Plows in weedy ground. The wheels are high, with broad  $2\frac{1}{2}$  in. tyres, have dust proof, removable Boxes, and are fitted with grease cups, which ensure perfect lubrication.



Orchard and Vineyard Three-Furrow Plow.

The Two-furrow Plow can be converted into a 3-furrow at any time by procuring the extra beam and body, and the 3-furrow can be reduced to a 2-furrow by removing the back furrow.

Take the B7 Shares, the same as the No. 7 single furrow Plow. These can be procured in steel or cast, also with reversible points.

Made in 2 and 3 furrow sizes.

Plows 9in. wide to 6in. deep.

Both the double and 3-Furrow Plows are fitted with either standard or short high Mouldboards, shifting head rack and handles; hand lever low down, and out of the way of the branches. Takes standard Hornsby D Shares.

Circular Coulters supplied if required; also steering rod, soft centre Mouldboards, or seat. Width of furrow adjustable to  $7\frac{1}{2}$ ,  $8\frac{1}{2}$ ,  $10\frac{1}{2}$  ins. added to the Double Furrow.

### UNSOLICITED TESTIMONIALS

**Double Furrow Plow Worked Land Not Turned for Twenty Years.**

I would like to say that my "Harvey" Double Furrow Mouldboard Plow has just completed twenty acres of land, which has not been turned over for close on twenty years. The ground in question, being ungraded, and having to be irrigated ere plowing could be done; this meant that several very hard patches had to be cut through. It is really marvellous how it stood up to the heavy work.

(Sgd.) JAS. STUART LOGAN, Tongala, Vic.

**"Easy Draught, No Trouble to Pull."**

I am well satisfied with the Plow, and can recommend it to anyone who is wanting anything in that line. I have used all makes, from one to six furrows, and I find your Double Furrow is equal, if not better, than any of them. It is easy draught, as two horses can pull it without any trouble.

(Sgd.) F. M. QUINLAN, Shepparton, Vic.

Write for catalogues of complete range of Orchard and Vineyard Horse and Tractor drawn Implements. Free.

# D. HARVEY, Implement Manufacturer,

## BOX HILL, MELBOURNE

SHOWROOM: 440 ELIZABETH STREET, MELBOURNE

AGENTS IN ALL LEADING DISTRICTS

## The Tractor on the Farm.

### Cheaper Than Horses.

At a meeting of the Karcultaby Branch of the South Australian Agricultural Bureau, Mr. A. J. Thomas read a paper which is reported as follows in the "Journal of Agriculture" of S.A. for April:—

The farmer who would make a success of his business must seriously consider three most important features, viz.: (1) maximum production; (2) minimum cost of production; and (3) an adequate price for his products. In this paper I intend to confine my remarks to questions 1 and 2.

Although great progress has been made in cultivation and harvesting

during the last few years, the farming industry as a whole is a long way behind many other industries in the extent to which it has adopted time and labor-saving appliances. In other undertakings, man-power and horse-power have been found too slow and too expensive, and therefore machinery has been employed to do the work. Machinery will increase the production and reduce the working expenses on the farm as well as in other industries.

My object in writing a paper dealing with this subject is to collect information from various sources to enable members of the Bureau to discuss the advantages to be derived from the use of tractors, and if it would be advantageous to (a) replace horses by tractors, (b) work the tractor in conjunction with horses, or (c) keep horses and leave the tractor alone.

#### Comparison With Horses.

The tractor with which I am most conversant is capable of doing the work of six of the largest and best horses; it will pull the same load and do continuous work. It will do 50 per cent more work than horses, and in addition to travelling at a greater speed, it takes only 10 to 15 minutes to prepare it for its work, and five minutes to put it away for the night. It works during the rest of the day without a spell, except for filling with water, kerosene, and oil. The attention of a team of horses occupies at least four or five hours each day for feeding, watering, harnessing, etc., thus giving at least four hours extra working time to the tractor as compared with horses.

The cost of six such horses would be no less than £30 each, a total of £180, which is the original cost of the tractor. With horses, one also has the additional cost of harness, chains, etc., which is considerable. In actual cost, maintenance, and depreciation, the tractor is the cheaper, and it can be worked 24 hours per day, if desired, which cannot be done with horses.

The tractor can be equipped to do power work on the farm, including the work of a stationary or portable engine. Road wheels are available to enable wheat, etc., to be carted to the station. Yorke Peninsula has proved one of the largest fields for the tractor, and farmers in these districts are strict adherents to the low-priced tractor in preference to other higher-priced makes.

As a stationary power plant, the tractor under review will deliver 18 h.p. to any machine driven through shaft, belt, gears, or chains, at an engine speed of 1,000 revolutions per minute. A governor can be attached where power requirements are either intermittent or disposed to fluctuate. It can be used as a transport or haulage unit, and driven under its own power at a speed of from six to twelve miles per hour. By using a four-wheeled trailer, a load of from 10 to 15 tons can be hauled without any difficulty.

As an industrial tractor, it can be purchased at one-fifth the cost of the average five-ton motor lorry. The daily fuel cost, interest on the small amount invested, depreciation, and

(Continued on page xvi.)

## "GREEN CROSS" Arsenate of Lead .. Powder ..

For  
Wet Spraying or Dry Dusting

DOES NOT BURN  
or  
WASH OFF.

Mixes instantly and remains  
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1 lb. of Green Cross Powder  
is equal to from 2 to 3 lb. of  
the best Arsenate of Lead  
Paste.

25 lb. Drums . . . 1/10 per lb.  
50 lb. " . . . 1/9 1/4 " "  
100 lb. " . . . 1/9 " "  
200 lb. Barrels . . . 1/8 " "

**Welch Perrin & Co.**  
Pty. Ltd.  
48-56 QUEEN'S BRIDGE ST.,  
SOUTH MELBOURNE.

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## Agricultural Legislation.

"Go Slow," says California.

IT is almost a habit to regard the United States, and particularly California, as models to the rest of the world in the matter of agricultural co-operation and agricultural legislation; but even there they have their troubles. Here in Australia, we have become accustomed to the various Governments actively interesting themselves in the control of industry, and the following summary of an article in the "California Fruit News," of February 20, may prove of interest.

Californian producers are viewing with some alarm the number of so-called agricultural relief bills, which are being proposed as legislation at Washington, believing "that we are more liable to make trouble for ourselves than otherwise. And we believe that the less of definite authority the Federal Government undertakes in this matter, the better off it will itself be."

The National Administration at Washington seems to favor legislation providing for the encouragement

of co-operative marketing associations and their general progress, and is understood to be opposed to legislation, which has as its basis Government price-fixing for export surpluses, etc. This may be very well in theory, but it is apt to overlook the "human factor" in the equation. "These things get easily to be overdone, and the remedy tends to prove worse than the disease. Personally, we don't quite see, after all the talk, education and promotion that has been going the rounds for so long in producers' co-operations, why it should be felt now necessary to further promote them through the leadership of the Federal Government."

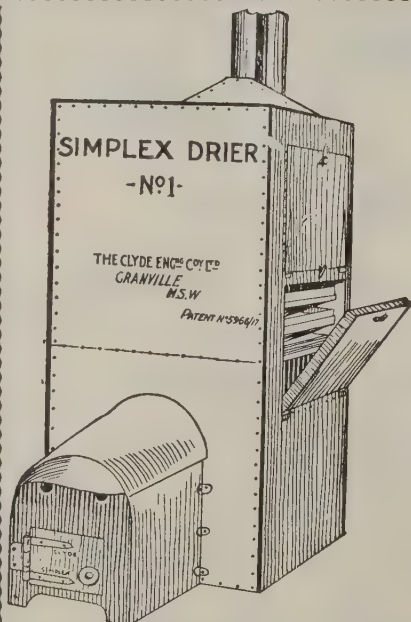
A fundamental of co-operation is the desire to co-operate. Failing action by the producers themselves, the next step in many cases has been the more or less forcible promotion of co-operative enterprises, and it is to be noted that practically all of such organisations brought about by the activity of the State of California during the period a few years

ago, when it was aggressively active in this development, have been unsuccessful (a number of them have proved disastrous). The best work in that direction has been done by the people concerned themselves, rather than in those enterprises governmentally promoted.

The creation of an interstate farm marketing association

is one of the proposals advocated in Congress. This idea has opportunities in saving waste and promoting satisfactory developments, but the factor of competition between various sections of the country cannot be eliminated with good results to anyone.

Another national legislative theory being advanced is to provide for fixing a minimum price on products before grown, so that the agricultural producer may know how much to produce. One of the cardinal theories of producers' co-operatives has been that they should not price their product until after it is ready, and the elimination of trading in futures by commercial operators has always been one of the important platform opportunities in co-operative promotion. There are some fundamental policies in these matters that ought to be decided upon in advance and the progress developed along the accepted lines, or else abandoned entirely, to take up some reverse plan



## The Clyde Simplex Driers

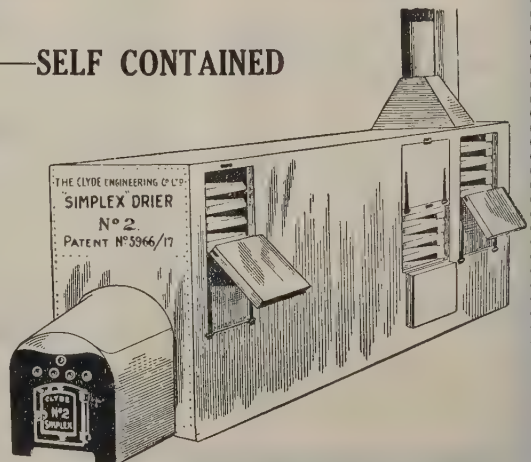
For Drying  
Fruit, Vegetables and other Products

NO MORE WASTE FRUIT OR VEGETABLES

SIMPLE — SELF CONTAINED

Made in Sizes to suit

Householders  
Small Orchardists  
or  
Large Factories



The Clyde Engineering Co. Ltd.  
GRANVILLE, N.S.W.

if the first tried seems not to have worked.

Recently, however, the House of Representatives passed a piece of agricultural legislation establishing a co-operative marketing division in the Department of Agriculture and appropriating 225,000 dollars for the first year's work of this new division, which is to be charged with aiding co-operative marketing organisations.

This, apparently, has the support of a great many interests and has by all odds the least harmful possibilities of any of the suggestions. It is not an agricultural relief measure, but one intended to promote the progress of agricultural prosperity, and is, accordingly, hardly criticisable now.

"The National Council of Farmers Co-operative Marketing Associations, composed of delegates from all sections of the country, which recently met in Washington, was split wide open on these legislative questions and had advocates in all directions. It seems apparent from the press reports that the most substantial view taken was that the control of surpluses and price-fixing were undesirable, and that co-operative marketing should be given a thorough trial before any other remedy for the ills of the farmer is resorted to, although there were numerous advocates for more radical legislation.

**For Promptness, Reliability  
and Careful Attention**

CONSIGN YOUR FRUIT TO

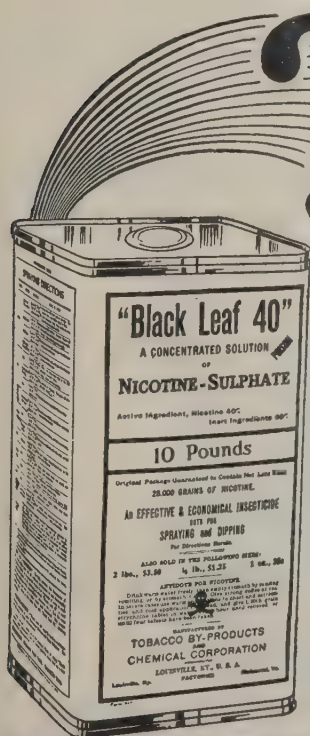
**RULE & BEAVIS**

FRUIT EXCHANGE,  
SYDNEY, N.S.W.

A TRIAL SOLICITED.

Shipping Number, 80.

Estab. 1888



**? Why  
be satisfied  
with dwarfs  
and culls**

Protect your fruit and rid your orchard and garden of Aphis and similar destructive insects at a cost of only a few cents a tree. "Black Leaf 40," the "Old Reliable" nicotine spray, is recommended by Agricultural Colleges and Experiment Stations. Spray singly or in combination with solutions for scale, codlin moth and other orchard pests.

**Sold by leading Australian and  
New Zealand Dealers**

**Tobacco By-Products and Chemical Corp.**

Incorporated

Louisville, Ky., U. S. A.

**Kills  
Aphis**

**"Black Leaf 40"**  
40% Nicotine

## NEWS FROM VARIOUS SOURCES.

### A World-wide Review.

"Citrus Leaves," California, for March, 1926, has much useful information. Here are some extracts:

### California's 1926 Orange Crop Estimated at over 20 Million Bushels.

20,400,000 boxes for this year is the estimate of the crop of California Oranges as compared with 18,100,000 picked last year. The Golden State is said to have approximately 400,000 boxes of Grape fruit for this season, which is slightly larger than the 1925 crop—387,000 boxes. Because of much of the citrus fruit being transported to markets by motor truck, it is impossible to estimate this year's commercial shipments.

Building a co-op. is like building a house—the foundation comes first. If it's built on weak principles and shallow ideals, the first flurry of discontent will wash it away.

### U.S.A. Fruit Exports, July— December, 1925.

From July to December, in 1925, the United States exported 805,206 boxes of Oranges, valued at £900,363; Prunes, dried, 100,731,797 lbs., valued at £1,566,655; Raisins, 95,957,171 lbs., valued at £1,403,856; fresh Apples, 3,462,323 boxes, valued at £1,807,447; and 1,340,691 barrels, valued at £1,111,538. For the same period, U.S.A. exported 276,845 bushels of Beans, value £240,916; and 1,177,805 bushels of Potatoes, valued at £411,375. Silk and coffee comprised the most valuable imports silk totaling (raw) £45,485,668, and coffee £30,299,408. The total imports of principal agricultural products reached the tremendous sum of £251,529,688, while exports totalled £215,850,413. The exports for 1924 for the same period were slightly in excess, being £246,070,876.

### England Likes American Grapefruit.

Judging from British import figures recently received by the United States Department of Agriculture, Great Britain is developing a real liking for American Grapefruit. In 1924 England imported from the United States 47,720 boxes of Grapefruit, valued at £37,611, while in 1925 her American Grapefruit imports were 141,300 boxes, valued at £109,980.



(Continued from page 299)

upkeep, are low. All works are enclosed against dust and dirt.

From personal inquiries, I have ascertained that in this district the tractor will work comfortably the following machines and implements.—A nine-foot harvester, ten-disc plough, eight-furrow plough, 16 combine, or a set of six harrows. The consumption of water is about a quart per day as compared with 50 galls. or 60 galls. for six horses.

#### Change of Address.:

The firm of B.P.B. and Co., fruit and vegetable merchants, and ship providers, exporters, etc., have removed from E.S. and A. Bank Chambers, Haymarket, to more commodious premises at George Street, Sydney.

Mr. E. Robinson, A.A.M.I.E.E., industrial and power plant engineer, of 82 Pitt Street, Sydney, has recently been appointed the representative in New South Wales for Messrs. Russell and Company, engineers, Box Hill, Melbourne, manufacturers of the well-known Bave-U sprayer. With Mr. Robinson's practical knowledge of the engineering business, the interests of the Bave-U sprayer should be favorably attended to. Robinson's advertisement appears elsewhere in this journal.

Mr. W. O. Johannson, General Secretary and Manager of the Sanatorium Health Food Company, Sydney, has just completed one of his periodical trips through New Zealand, on behalf of his company. In connection with the Sanatorium, there are business houses at Melbourne, Sydney, Brisbane, Adelaide, Perth, Hobart, Auckland, Wellington, Christchurch and Dunedin.

#### "WHY HAVE INDIGESTION?"

Thousands of people in Australia to-day have decided that Indigestion is not only unnatural but unnecessary. A poor digestion or weak stomach demands just the little assistance which a proper combination of herbal juices will supply. A.M.S. is a very well established remedy, which has aided many chronic dyspeptics to eat well, and have the eager appetite of a child. A little dose every day until the stomach is strong and healthy should be made part of the daily dietary. Take it regularly till you can do without it altogether. At all chemists 3/-, or by post 3/6 per bottle from T. A. Dickson, Chemist, Geelong, Vic

## New Zealand is an Important Market for Australian Fruit.

### Ship Your Oranges, Lemons, Grapes to New Zealand



All consignments for this market will have careful attention and realize highest prices if sent to

#### The Co-operative Fruitgrowers of Otago Limited, Dunedin

Personal supervision of every consignment.

Cheques posted promptly.

Drop us a Line or Cable  
"Peachbloom," Dunedin.

### SHIP TO AUCKLAND, N.Z.

Consign to the Up-to-date  
and Established Firm of

### TURNERS & GROWERS — LTD. —

City Markets, Auckland  
New Zealand.

Salesrooms comprise—

55,000 ft. of FLOOR SPACE,  
including  
FRUIT COOL STORAGE ON  
PREMISES.

Staff of nearly 100 Employees  
Competent Salesmen only  
employed.

HIGHEST PRICES  
PROMPT RETURNS.

CABLE ADDRESS: "Cantab"  
P.O. Box 439.

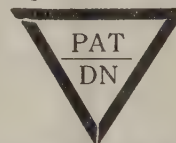
BANKERS: Bank of New  
South Wales, AUCKLAND.

## EXPORTERS TO NEW ZEALAND!

There is not a better market  
for you than

## DUNEDIN

Ship under Brand



To—

## THOS. PATERSON & CO.

Established 1879.

Fruit and Produce Brokers and  
Auctioneers

VOGEL STREET - - DUNEDIN

We Solicit Consignments of  
ORANGES LEMONS PASSIONS GRAPES

Cable us "PATRICROFT," Dunedin,  
We will give you Market Values.

Address all correspondence to—P.O. Box 132, Dunedin

### Sprays for Orchard Pests.

Attention is directed to the complete line of spray materials manufactured by A. Victor Leggo and Co.

The sprays include nicotine sulphate, arsenate of lead, lime sulphur, benzole emulsion, spray spreader, etc.

All sprays, which are sold under the name of "Vallo," are obtainable from merchants and storekeepers in all fruitgrowing centres throughout Victoria. Agents for the other States of the Commonwealth and New Zealand are indicated in the firm's advertisement which appears on page vii.

### Elephant Brand Fruit Sprays.

Messrs. Jaques Pty. Ltd., manufacturers and distributors of Elephant

brand spray materials, advise that their New South Wales' agent is now the Producers' Distributing Society Ltd., formerly known as the Coastal Farmers' Co-op. Society Ltd. Their address is Quay and Valentine Streets, Sydney.

This firm is also represented in all the other States of the Commonwealth, and New Zealand, with the exception of Queensland, for which State a reliable agent is wanted.



GIBBS, BRIGHT & CO.—See Page XIV

### U.S.A. CO-OPERATIVE SUCCESS.

At the sixteenth National Orange Show recently held in San Bernardino, the Mutual Orange Distributors, one of the State's progressive co-operative companies, carried away the lion's share of the awards with its huge exhibit of "Pure Gold" brand citrus fruits. Over 1,050 dollars (£210) in cash were won, besides 48 prizes, including 18 firsts, 17 seconds, 13 thirds.

This is the third consecutive victory within a year for the organisation, it having won sweepstake awards at the Anaheim and Alhambra Expositions. Particular interest has centred in the M.O.D. exhibits because the fruit used was "Brogdaxed" and "Brogdited," processes which prevent decay and shrinkage, and save thousands of dollars to citrus growers through elimination of the bulk of refrigeration and pre-cooling charges.

## METTERS NUFREND SPRAYING OUTFITS

We are taking this opportunity of introducing ourselves as makers of SPRAYING OUTFITS as an adjunct to our many other lines. WE HAVE A CATALOGUE OF SPRAY PLANTS which should fill any requirements in the VINEYARD or ORCHARD, also for the BLOWFLY PEST.

Included in this list we have Hand Power, Horse Tractor Power and Engine Power. Our Pumps are standardized—all wearing parts are of Brass and Bronze, and easily replaced. We can supply Power Plants for narrow lands, which are equally safe in their operations in the hill districts, as in flat country.

We ask you to write us for a complete Catalogue and state what your requirements are, so that we can advise you to the best advantage.



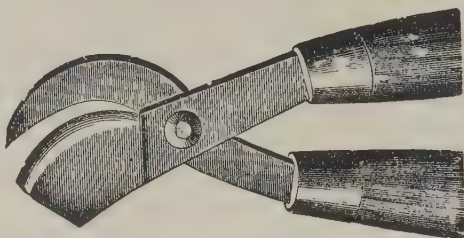
Catalogues posted free to any Address.

**METTERS LIMITED, 142 Rundle St., ADELAIDE, S.A.**

Victorian and Tasmanian Agents—The FARM & PASTORAL SUPPLIES Pty. Ltd., 500-2 Bourke St., Melbourne.



## Be Prepared for the Pruning Season



WE have made a specialty of Orchardists' Requirements, and in offering you the following Tools and Materials, can assure you that every item is the best Quality of its kind. A special Illustrated Leaflet will be sent on request.

### "ROCKDALE" BRANCH CUTTERS.

—26in. handles, 7/6; 41in., 9/6.  
**WISS' SOLID STEEL PRUNING SHEARS.**—These Shears will cut clean the thickest twigs or the most delicate tendrils.

No. 109.—9in. overall, 12/3; extra blade, 3/-.  
 No. 110.—10in. overall, 14/3; extra blade, 3/-.

**Reiser Pattern Pruning Shears.**  
 No. 290, 8 1/2in., 8/6.

No. 190. Black Finish, 9in., 5/3.

**California Patterns**  
 — Length, 9in., volute spring, 4/-.

**Lighter Pattern,** 3/3; Nickel plated, 6/6.

**Genuine "Mexican" Pruning Shears.**  
 — Solid steel frame, ribbon steel springs, 8in., 6/6; 9in., 7/3.

**With Bone covered Handles,** 8/3.

**English Branch Cutters,** 27in. long, 8/6; 30in., 10/6; 36in., 12/-.  
**Hudson Fruit Thinning Shears,** 6in., 1/3.

**Pruning Saws (Disston's),** fixed blade, wood handle, 7/-.

**14in. Adjustable Blade,** cut any direction, 8/6.

**"Duplex" Pruning Saws,** 12in., 3/3; 14in., 3/6.



Standard Tree Pruners, 8ft. handle, with pull wire 7/9.

Full Stocks of Spraying Materials and Spray Pumps always on hand.

**McPherson's**  
 Proprietary Limited

582-592 COLLINS ST., MELBOURNE.

Established 1860.

## FRUCHTHANDEL GESELLSCHAFT SCIPIO & FISCHER

Fruchthof - BREMEN - Germany

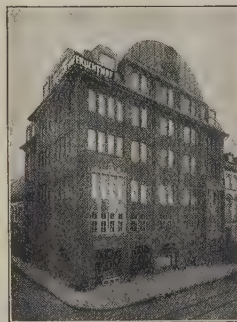
Cable Address—  
 "Orange," Bremen

ESTABLISHED  
 1902

Solicit Consignments of Australian, Tasmanian & New Zealand Fruits

ADVANCES  
 OFFERED  
 ON  
 CONSIGN-  
 MENTS

Reliable  
 Representatives  
 Wanted in  
 All States.



### Australian Representatives:

VICTORIA: The International Fruit & Mercantile Co.

410-414 Flinders Lane, Melbourne

WEST AUST.: Messrs. Paterson & Co. Ltd., Perth

SOUTH AUST.: Messrs. Geo. Selth & McRae Ltd.  
 Adelaide

## Keep Your Citrus Crop Clean

### Fumigate with CYANOGEN GAS

(Calcium Cyanide)

Convincing proof of the tremendous benefits derived from fumigation with **Cyanogas** (Calcium Cyanide) is provided in the report of the Manager of the Kurrajong Soldiers' Settlement for March, 1926. The two extracts from this report are indicative of the high opinion of those in charge of this successful citrus area.

"Red Scale is the citrus growers' 'Bugbear,' but last Winter's cyaniding of 12,000 trees proved that its control is comparatively easy with '**Cyanogas**,' as it not only kills the scale, but assists the development of trees, without showing harmful after effects. Undertakings have now been signed for the fumigation of 17,000 more trees here this Autumn, and large areas outside our Estate are also being treated."

"There is no effective substitute for fumigation."

"Fumigation in Autumn will kill all scales mentioned—**Red, Wax, Olive and Soft**—in one operation."

"Fumigation will save your trees and give them a chance to develop fruit of size and quality, and set a good crop for the following year. The question should not be how many cases can we pull, but how can we get better fruit. There is no such thing as over-production to the grower who produces high-class Oranges below cost of the other growers' culls."

### STATE DISTRIBUTORS:

N.S.W.: Buzacott & Co. Ltd., 7-11 Market St., Sydney.  
 Victoria: A. Victor Leggo & Co., Melbourne.

Sth. Aust.: S.A. Farmers' Co-op. Union Ltd., Adelaide.

Q'land.: Buzacott's (Q'land) Ltd., Adelaide St., Brisbane.

W. Australia: Harris, Scarfe & Sandovers Ltd., Perth.

Tasmania: Davidson & French Ltd., Launceston.

Roberts & Co. Ltd., Hobart.

# The Improved Ford Touring Car

Complete with Electric  
Lighting and Starting  
Equipment.

## £179

F.O.B. Ford Works in  
each State.

— many important changes

An Improved Touring Car is Announced, embodying outstanding achievements in Beauty of Design, Quality of Construction and Completeness of Equipment.

New Streamline Design.  
Longer and Lower-hung Body.  
Whole Chassis Lowered.  
Re-designed Black Hood.  
New Side Curtains which open with doors.  
Double Ventilating Windscreen.  
Lower Seats and More Leg Room.  
New Type Spare Tyre Carrier.  
Larger and More Shapely Crown Type Mud Guards.  
Tail Light and Number Plate Bracket now in One Unit.  
Dash Light on Re-designed Instrument Board.  
Windscreen Wiper and Rear-Vision Mirror.  
Nickelled Radiator Shell and Head Lamp Rims.  
New Type Clutch and Brake Pedals.  
Hardwood Floor Boards, Reinforced by Pressed Steel around Pedal Slots.  
8-Gallon Petrol Tank, now under the Cowl.  
New Deflector Plate directs Engine Heat away from Driver's Feet.  
Improvement to Fan and Fan Assembly.  
New Type Combined Petrol Choke and Adjuster, now located on Instrument Board.  
Compartments for Tools, etc., under both Front and Rear Seats.

Transmission Bands now Removable through Transmission Inspection Plate.

Electric Wiring Simplified, due to New Convenient Location of Coil Box and Terminal Block.

Bonnet is Larger, with Added Louvres.

Sediment Bulb and Ignition Coils accessible for Adjustment by simply raising Bonnet.

Brake Shoes on Rear Wheels now Raybestos-lined. Diameter increased by 3 inches and width by  $\frac{1}{4}$  inch.

Width of Transmission Brake Bands increased to  $1\frac{1}{2}$  inches.

Brake Surface Increased by 32%.

Improved Type Transmission Cover now Surfaced and Solidly Fixed to Cylinder Block.

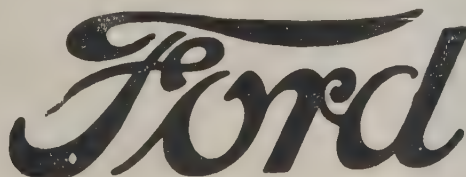
Extra Braces from each Side of Cylinder Block to Crank Case, to Prevent Vibration and Engine Torque.

Reduction through Altered Steering Gear Mechanism increased from 4 to 1 to 5 to 1.

New Type Crank Case Cover permits adjustment of No. 4 Bearings without use of Specially-made Wrenches.

Engine may now be Removed Bodily and with Little Trouble for Bench Test or Overhaul.

See Your Nearest Ford Dealer. Easy Terms arranged under Ford Purchase Plan.



FORD MOTOR COMPANY OF AUSTRALIA PTY. LTD. BRANCHES IN ALL STATES.



Ample Stocks  
throughout  
Australia  
Every Season



Ample Stocks  
throughout  
Australia  
Every Season

## Arsenate of Lead

Every other manufacturer refers to Swift's  
as the Standard of the Line

### NEW STOCKS OF SWIFT'S EVERY SEASON

Growers who want the BEST RESULTS and insist on having SWIFT'S should book their orders early.

Every grower knows it is Folly to Plant Inferior Trees  
Price does not count.

Inferior Sprays are dear at any price, and it is folly and waste of money and time to use them.

They Damage Trees secured at great expense and labor, and do not give the Best Results as regards quality and percentage of clean fruit.

SWIFT'S does not damage Trees or Fruit.

SWIFT'S improves Quality and Color of the Crop.

SWIFT'S Saves Money and Labor, and because it does not wash off or wear quickly, Growers need not Spray so many times as with other materials

SWIFT'S secures the maximum of Clean Fruit at the minimum of expense of spraying, picking and packing, there being no Grubby Fruit to handle.

"The Grower who sprays thoroughly with SWIFTS is the man who succeeds."

# SWIFT'S ARSENATE OF LEAD

### AGENTS :

ROCKE, TOMPSITT & Co., 292-298 Flinders St.,  
Melbourne, Victoria

D. & W. CHANDLER PTY. LTD., 290 Brunswick  
St., Fitzroy, Victoria

E. & W. HACKETT LTD. 73 Rundle St., Adelaide,  
South Australia

HARRIS, SCARFE & SANDOVERS LTD., Hay  
St., Perth, Western Australia

F. W. HERITAGE & Co., Hobart and Launceston,  
Tasmania

ANDERSON & Co., 399 George Street, Sydney,  
New South Wales

AUSTRALIAN DRUG Co. LTD., Australia House,  
Carrington Street, Sydney, New South Wales

HOLDSWORTH, MACPHERSON & Co., George  
St., Sydney, New South Wales

TAYLOR'S & ELLIOTT'S LTD., Charlotte St.,  
Brisbane, Queensland

# PEDIGREE FRUIT TREES

## CITRUS

APPLES, APRICOTS, PRUNES,  
PEARS, PLUMS, PEACHES, etc.

## QUALITY PRIME

Correspondence Invited  
Orders Being Booked  
Send for Our Catalogue  
The Most Up-to-date  
in Australia

**F. Ferguson & Son,**  
Australian Nurseries,  
Hurstville, N.S.W.



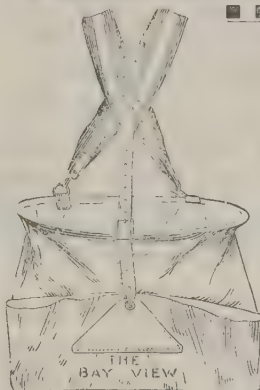
# GRUBBING

Thousands in Use  
It earns its  
Famous  
LOW PRICE  
in a Few Days  
Write for  
Catalogue

WITH A  
"DIGGER" WINCH

A Man can uproot more Trees and Stumps in  
a Day than he would dig out in Ten Days

QUICK MANUFACTURING CO., 75 Penders Street, Thornbury, Victoria



## "Bay View" Fruit Picking Bag

CAN BE USED FOR ANY CLASS OF FRUIT

Allows use of Both Hands in Picking.  
No Bruising of Fruit.

Weight Carried on Shoulders instead of Back  
of Neck.

MR. J. LANG, President of the Australian Conference of  
Fruitgrowers, writes:—"After two season's use, I am well  
pleased with Bags; fruit receives the minimum of handling,  
and is less liable to damage. They are also a great time saver."

Price 12/6 each

Postage extra, one bag, 1/-; two, 1/9

**F. R. MELLOR, 440 Elizabeth St., MELB.**

## "Fumigation will give the Kill"

Clean up your Citrus Trees

with

# CYANOOGAS

(Calcium Cyanide)

Fumigation with Cyanogas (Calcium Cyanide) is the  
surest method known for the eradication of Red Scale,  
Wax Scale, Olive and Soft Scale, and all other insect  
pests which infest citrus trees.

One fumigation gives freedom from pests for three  
years, provided infestation does not take place from  
adjoining orchards.

The following extract from the "Kurrajong Soldiers'  
Settlement Bulletin" for May, 1926, shows that fumig-  
ation with Calcium Cyanide is long past the experi-  
mental stage.

"TO THE LAST RED SCALE: Since making  
this our objective, the fumigation has made  
great headway. Some 26,000 trees have been  
dusted with Cyanogas (Calcium Cyanide) on  
the settlement, and about half that number in  
surrounding orchards. There is no lack of  
confidence that fumigation will give the kill."

### STATE DISTRIBUTORS:

N.S.W.: Buzacott & Co. Ltd., 7-11 Market St., Sydney.  
Victoria: A. Victor Leggo & Co., Melbourne.  
Sth. Aust.: S.A. Farmers' Co-op. Union Ltd., Adelaide.  
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W. Australia: Harris, Scarfe & Sandovers Ltd., Perth.  
Tasmania: Davidson & French Ltd., Launceston.  
Roberts & Co. Ltd., Hobart.

## FRUCHTHANDEL GESELLSCHAFT SCIPIO & FISCHER

Fruchthof - BREMEN - Germany

Cable Address—

"Orange," Bremen

ESTABLISHED

1902

Solicit Consignments of Australian, Tasmanian & New Zealand Fruits



ADVANCES  
OFFERED  
ON  
CONSIGN-  
MENTS

Reliable  
Representatives  
Wanted in  
All States.

### Australian Representatives:

VICTORIA: The International Fruit & Mercantile Co.  
410-414 Flinders Lane, Melbourne  
WEST AUST.: Messrs. Paterson & Co. Ltd., Perth  
SOUTH AUST.: Messrs. Geo. Selth & McRae Ltd.  
Adelaide





## "Dust instead of Spray"

POLICY OF INSURANCE

# CLOUDFORM DUSTS INSURANCE UNLIMITED

ISSUED TO Mr *Up-to-Date Vigner*  
ADDRESS *"Wellkept Vineyard"*  
*Australia*



This Policy witnesseth that the Insured named above is insured against loss and damage arising from the ravages of those serious Fungus Diseases of Grape Vines known hated and feared by all good Vine Growers, to wit:—

**DOWNY MILDEW**  
**ANTHRACNOSE** (*Black Spot*)  
**OIDIUM.**

under the conditions herein stipulated, and for the consideration set out at the foot hereof

**CONDITIONS:—** The Insured will carefully apply CLOUDFORM DUSTS at the correct times, and in the approved manner, i.e. with a Niagara Hand Duster Gun or other Appliance as set out in the **CLOUDFORM Dust Book** x

**CONSIDERATION:—** The Insured shall pay the prices set out in the Cloudform Dust Price List for the time being in force, with the assurance that every effort will be made by the Company to reduce, from time to time, the said Prices.

SIGNED FOR AND ON BEHALF OF

x *This 20 page Book is yours for the asking*  
*Address request to GIBBS, BRIGHT & Co*  
*27 Grenfell Street*  
*Adelaide.*

**it's much the Better way"**



# COVENTRY

---

The Hub of the Motor Industry of  
**GREAT BRITAIN**  
has nearly  
**200,000 INHABITANTS**  
DEMANDING **AUSTRALIAN** FRUIT

---

**GROWERS** Why Not Supply  
Them Direct?

---

WE HAVE COMMODIOUS PREMISES  
EFFICIENT SERVICE and A SOUND REPUTATION;  
and we are in  
THE CENTRE OF THE THICKLY POPULATED  
INDUSTRIAL AREA OF  
**ENGLAND**

Commission Basis Only.      Advances Made to Cover Freight Costs Etc,

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**BOSWELL BROS. & DAVIS**

Bankers:—  
Midland Bank

Phone—1860

**Fruit Salesmen**  
**COVENTRY, ENGLAND**

Cables:—  
Boswell Barracks,  
Coventry  
Code:—Bentleys.



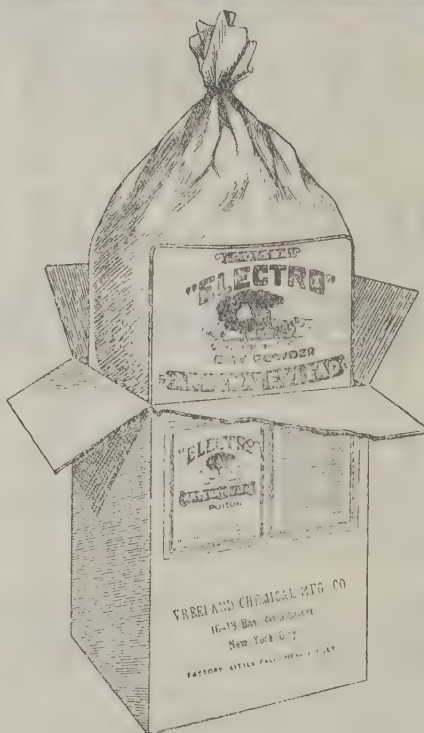
# ELECTRO DRY ARSENATE OF LEAD

FOR SPRAYING OR  
DUSTING

PACKED IN STRONG  
ROPE FIBRE BAG

EASY TO HANDLE  
EASY TO MEASURE  
**NO DUST**

"ELECTRO" Dry Arsenate  
of Lead represents the  
highest development in  
Spraying Material



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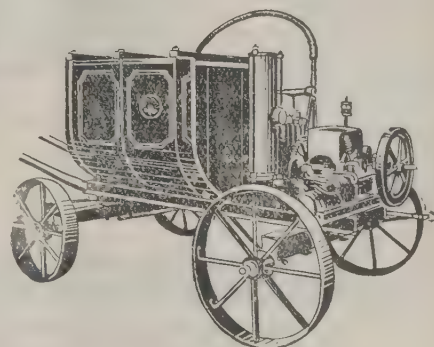
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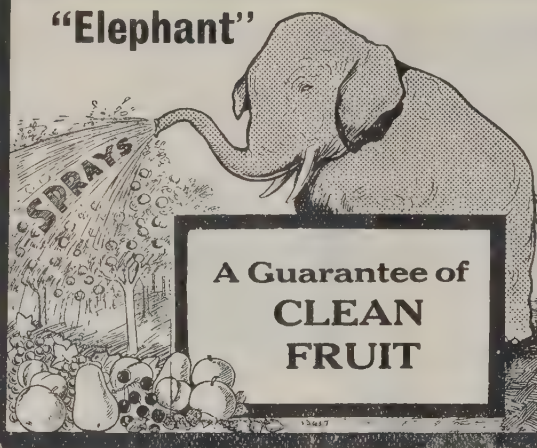
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Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of each Month.

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**AGRICULTURAL MINISTERS' CONFERENCE.****Fruit Grades Adopted.**

The Annual Conference of Ministers of Agriculture was held in Brisbane during the second week in June, when all States were represented. The report submitted by the Fruit Committee was adopted, items agreed to including the adoption of uniform grade standards for Prunes, Bananas, canned fruit, Apples and Pears, and Citrus fruits.

In regard to Apple grades, the Conference agreed to the amended description of "plain grade" as already decided on by the Australian Fruit Council and the Australian Conference of Fruitgrowers. The prohibition of the sale of immature Citrus fruit was decided on. For the first time grade standards for Citrus fruits were adopted.

Other items approved included the continuance of the Citrus insurance fund, and the export bounty on sweet wine, inspection of wine for export, destruction of starlings and sparrows, research work in regard to sprays and control of pests, and closer co-ordination between the Fruit Branches and the Nurserymen in the various States. It was decided that the authorities at Australia House be asked to provide reports at the conclusion of the season, giving details of the arrival of vessels, condition of cargo, and prices realised.

Further details will be published later.

**Notes in Brief.**

"Although there is as much fruit in the Victorian cool stores as at this time last year, Tasmanian growers are shipping consignments of Apples to Victoria, which suggests that Victoria has a short crop," is a statement made by the Victorian Department of Agriculture.

S. African citrus exports increased from 45,000 bushels in 1919 to 1,000,000 bushels in 1925. It is estimated that by 1930 the export will have increased to 5,000,000 bushels, and that in 10 years from now the export of citrus fruit from S. Africa to European markets will reach 8,000,000 bushels.

What is said to be the largest Plum orchard in Arizona is being planted in the vicinity of Mesa. This will consist of 80 acres of Santa Rosa Plums and is claimed to be the largest exclusive Santa Rosa Plum orchard in the world.

**TASMANIAN FRUIT EXPORT.**

The export for 1925 is computed to have brought in £400,000 of new money into Tasmania, over costs. The crop marketed in 1926 was 3½ million bushels, including export and inter-State. The previous record for export overseas was 1½ million bushels, but 1926 eclipsed all by Tasmania sending over two million bushels.

**NEW ZEALAND.****Auckland Fruitgrowers' Conference.**

**THE ANNUAL CONFERENCE** of the Auckland Provincial Fruitgrowers' Council was held at Auckland on June 9, when Mr. S. H. Izard presided. Numerous Associations were represented, and Mr. J. A. Campbell, director of the horticultural division of the Department of Agriculture, and Mr. T. C. Brash, President of the New Zealand Fruitgrowers' Federation, were also present.

Reviewing the present conditions of the fruitgrowing industry, Mr. Brash stated that **two outstanding points** in the past season were the great increase in production, and the very big percentage of fruit that was of very fine quality, and was available for export, in some cases up to 98 per cent. of the fruit taken from the trees being suitable for export. The greatest increase in production had been in the Auckland province, where the export of Apples and Pears had been 792 cases in 1923, 845 cases in 1924, 9,497 cases in 1925, and in the season just ended no less than 58,564 cases. The figures, Mr. Brash remarked, helped to show the part the fruit industry was playing in the economic life of the Dominion.

**Export Control Board.**

In regard to export, 400,000 cases was the estimated shipment during the season, the actual crop being 700,000 cases. There was an insufficiency of cool storage space if the fruit were to be pre-cooled. Next season the Fruit Export Control Board intended to exercise a greater measure of control than in the past. There would be no pooling, each grower receiving his own returns. Details would be finalised on the return from England of the Chairman of the Board, Colonel Gray. The Control Board would work in conjunction with the Fruitgrowers' Federation, using the latter's organisation at the export ports, instead of setting up a separate body which would only be required for a few months in the year. The Federation was extending its activities, and an

office would be opened in Auckland. Mr. Brash announced that the Control Board was endeavoring to arrange a shipping contract in conjunction with the Meat and Dairy Council Boards.

Mr. H. E. Napier, Secretary of the Federation, stated that it had been decided to use the Canadian case, 18 in. by 10½ in. by 11½ in., during the coming season, recent trials having shown it to be satisfactory.

The Conference unanimously supported the proposal of the Fruit Export Control Board to take control in connection with export to the extent of the choice of merchant and the port to which the fruit should be shipped.

The grievances of Auckland growers in regard to last season's shipments were thoroughly discussed.

The Conference approved a suggested alteration in the Control Act, providing that the adoption or rejection of any proposal put to the vote of producers should depend on the number of votes cast and not on the number on the roll.

#### Prohibition of Imports.

The prohibition of the importation of Apples was supported by the Conference, speakers stating that the Dominion could grow all the Apples required for local consumption, and that the dumping of Canadian and American Apples adversely affected the New Zealand growers. Support was also accorded a proposal for the re-imposition of the import duty on Grapes and for the prohibition of the importation of Raratongan Tomatoes during the months of November and December.

The adoption of some system of local control, with the standardisation of supplies to the New Zealand markets and the elimination of "rubbish," was the subject of considerable discussion, Mr. Brash stating that the glut of supplies to the markets was as bad as ever it had been. Growers and consumers alike desired an improvement in the quality of the fruit offered for sale in the Dominion.

Mr. E. C. Walton pointed out the prejudicial effect of inferior fruit and absence of grading, and other speakers emphasised the necessity for standardising supplies.

The Conference thereupon approved the principle of local control for the standardisation of supplies, and asked the delegates to the New Zealand Conference to confer with the Hawke's Bay and Nelson delegates on the best methods of standardisation.

Mr. S. Izard was elected Auckland director on the Federation, and the

following were appointed as delegates to the Dominion Conference to be held in Wellington on June 30:—Auckland district, Messrs. F. Firth, W. J. Rodger, H. Paltridge; Whangarei district, Mr. H. R. Becroft; Hamilton district, Mr. S. House; Thames district, M. J. H. Davidson.

Messrs. Becroft, Firth, Rodger and Ballentine were appointed a committee to act with the Auckland representative of the federation.

The reinstatement of the orchard tax was favored.

Eulogistic reference to the work of Mr. W. H. Rice, orchard instructor in the Auckland district, and his staff was made by several speakers, and the Conference passed a hearty vote of appreciation.

#### NEW ZEALANDER VISITS AUSTRALIA.

N.Z. Export Trade is Rapidly Expanding: 750,000 Bushels Sent Overseas in 1926.

Mr. Ralph Paynter, of Hastings, Hawke's Bay, New Zealand, is at present visiting Australia. Mr. Paynter is President of the Hawke's Bay Fruitgrowers' Association, a member of the N.Z. Institute of Horticulture, and one of the Dominion's foremost orchardists, and was able to give some interesting particulars in regard to the fruit industry in New Zealand. The export for 1926, Mr. Paynter states, amounted to 750,000 cases, and it is anticipated that the export will shortly reach a million bushels.

#### IMPROVED FRUIT GRADER.

An improved model of the "Guider" Fruit Grader is now being manufactured. An illustration appears on page 330. There is a primary short grading roller, which takes away the over-sized fruit, allowing the average-sized fruit to pass under the main roller. This roller is placed at an angle to allow the several sizes of fruit to pass underneath. The number of grades desired can be obtained at will. The sides of the bins are removable and adjustable, to allow for a greater accumulation of average-sized fruit, if an average-sized run of fruit is being handled.

The ends of the bins can be removed to allow the fruit to go direct into cases, if desired. The grading is gentle; the fruit rolls, and at no stage is there a drop. The manufacturers state that the grading unit only can be supplied if desired—that is, the grader minus the bins—in case the purchaser wishes to supply his own bins. The "Guider" Grader

is stated to be suitable for grading all kinds of fruit, also Potatoes. Distributors are wanted in all centres. Literature and prices are obtainable from the manufacturers, Messrs. Scott & Son Pty. Ltd., 84 William-street, Melbourne.

#### DISTINGUISHED HORTICULTURIST PASSES.

The Late Mr. J. Hawter, of Western Australia.

We regret to announce the death of Mr. Hawter, of Blackwood House, Mullalyup, Western Australia, who passed away on May 12, in his 64th year. Mr. Hawter had been in good health until about two months previously, and personally directed his ever-expanding business. Of him the "Blackwood Times" said:—"Born at Diesback, near Berne, the capital of Switzerland, on January 19, 1863, he early displayed marked ability. At the early age of 19 he was foreman horticulturist at Crystal Palace, London, with a staff of 40.

"Coming to Western Australia in 1882 he forsook its latent possibilities. Establishing a nursery and orchard at Smith's Mill, with a branch at Sawyer's Valley, in the ranges east of Perth, he laid the foundations of his extensive enterprise that now includes the orchard at Glenforrest, Citrus Nursery at Harvey, and the large well known nurseries and orchard at Mullalyup."

Mr. Hawter also rendered valuable public service, both in the local governing bodies, the Royal Agricultural Society, the Balingup, Harvey, and other district Agricultural Societies. He was buried in the Balingup cemetery, the funeral being attended by practically every resident of the district, and representative of the many public bodies with which he was connected. His passing is deeply regretted.

#### ARSINETE (Arsenate of Lead Powder).

"Arsinette" is manufactured by the proprietors of Cooper's Sheep Dip. Features: Finest of lead-arsenate particles, perfect suspension, even distribution, adhesiveness, effective for codlin caterpillars and other pests. A valuable spreader is incorporated during manufacture. Mixture from 1½ lbs. of arsinette, with 100 gallons water. Price: 25 lb. cartons, 1/6 lb.; 5 lb. tins, 2/4 lb. Victorian Agents: NEWELL & CO. PTY. LTD., 189 King Street, Melbourne.



# The Codlin Moth

## Detailed Life History Needed.

Trained Observers in Orchard Centres Should Advise Best Spraying Times and Prevent Waste and Loss.

The Benefits of Bandaging, Orchard Sanitation and Trapping.

A Paper Read by Mr. J. H. Lang at the Victorian Fruitgrowers' Convention at Portland.

ONE OF THE GREAT PROBLEMS confronting all industries at the present day is the elimination of waste, or the utilisation of what would otherwise be waste products to profitable use.

Mr. J. J. Davies, in the "American Fruit-growers' Magazine" for February, 1926, estimates the insect losses in U.S.A., at 2,000,000,000 dollars, or £500,000,000, an amount equal to eight times the property loss from fire, and almost £5 per head of population.

Cunningham, in "Fungus Diseases of Fruit Trees" estimates the loss in New Zealand to be 11 to 16 per cent.—with Apples equal to £40,000 to £60,000, and with Peaches 12 to 19 per cent.—£5,000 to £8,000.

In Victoria I think I can safely say that 15 per cent. of the crop is lost annually through various causes, the principal diseases being black spot and codlin moth. This means that the Apple growers pay a toll to diseases equal to the value of the fruit exported to the English and Continental markets, or a sum approximately on £100,000.

What proportion of this can be saved?

There is at present no profitable outlet for diseased fruit; the only alternative is to wage our war against pests more thoroughly, and more intelligently. The two great causes of failure in the past have been lack of thoroughness in application, combined with lack of knowledge of the life history and habits of the disease concerned.

Mr. Davies, also states that 75 per cent. of the insect losses in U.S.A. could be avoided if growers knew the principles of insect control, and intelligently utilised the known means of control.

Reports from many districts in this and adjoining States tell us that the codlin moth has been more prevalent this season than formerly. This may be due to more suitable climatic conditions, or to conditions that are adverse to the life of its natural enemies. The codlin moth being an imported pest, the former reason is probably the correct one.

We are at present handicapped by not having available

### a detailed life history

of this insect. We know in a general way that it emerges as a moth in the spring, and lays its eggs on the fruit, and that about the middle of summer we may expect a second brood. But what is wanted is observation extending over a

period of years, with as large a number of insects as possible to show the variations of life history from year to year in the date of emergence of the moth, the time of egg laying, time spent in Apple, etc., so that by comparison of other years, taking climatic conditions into consideration, one can apply the sprays at times to secure best results.

Records taken in the Colorado Agricultural College on 20,319 moths over a period of four years show that the over-wintering larvae transform into moths about the time or shortly after the trees are in bloom, the eggs then laid hatch in from six to fourteen days, according to temperature, the average feeding time is from 20 to 24 days. The length of the different stages forming the life cycle vary with the different generation and season, the variation being due principally to the difference in temperature.

Egg deposition occurs largely during late afternoon and early evening. A drop in temperature or a rain at this time will materially effect egg laying. A cold snap will only cause postponement, while a longer cold spell will reduce the seasonal egg record. A variation of as much as 20 days has been observed in different years as to dates on which first eggs of second brood appear.

The life cycle of the insect, from egg to egg, was in 1918, 62.9 days; 1919, 48.11 days; and in 1920, 54.89 days; a difference of 13 days in 1918-1919.

In combating this disease our first line of defence is undoubtedly spraying. The times and number of applications necessary vary very much in different years and localities. It is here that

### expert help would be valuable

with a trained scientist, watching the moth development, and advising growers when to spray; where this is not available Colorado recommends the calyx spray started when blossoms are 90-95 per cent. off. The second application three-four weeks later, according to temperature, and another cover spray may be given in about 10-12 days.

The spray for second brood larvae is the most difficult to time correctly; the best plan is to examine bandages on the trees for the larvae, spraying for the second brood being necessary from 30-42 days later according to temperature.

Other means of control are **bandages on the trees**. With the improvement of spray material

and machines this has fallen into disuse, but there is no doubt that it would be found very profitable where the infestation is severe.

**Orchard sanitation** has an important bearing on the campaign. Loose bark should be scraped from trees, crevices filled with putty, or grafting wax, props used in the orchard thoroughly cleaned, and fruit cases kept under close cover until all moths have emerged.

A system of trapping tried by me this season in a small way gave results that more than justify its extension in the future.

Small tins containing a 10 per cent. solution of vinegar or fermented Apple juice were hung in the trees. About a dozen years ago a preparation called Frenler was placed on the market for trapping codlin moths, but was not too successful. My experience last season was that numerous moths were caught from the blossoming period onwards to early December—the catch especially

in the earlier part depending a lot on the temperature.

After Christmas, moths of what I believe to be the second brood were caught in fermented Apple juice. Other insects were also caught, but the percentage of beneficial ones was very small.

Other means than spraying are necessary to cope with this pest, as even where its attacks are successfully resisted by the spray there are always a number of stung Apples, whose market value is reduced. One Apple was found in Harcourt this year with no less than 20 stings: this shows the effectiveness of the spray, as none of them succeeded in getting through, but the Apple was reduced, commercially, worthless.

I have no doubt that combined action by all growers against codlin moth, combined with thoroughness of application and correct using of sprays would in a few seasons materially reduce the damage done by this pest.



At Diamond Creek, Vic. General View of the well-kept orchard of Mr. G. T. Herbert, showing Stewart's and Jonathan Apples.

## CODLIN MOTH IN AMERICA.

Useful Suggestions for Australia.

Research Work Needed.

The Sixteenth Annual Report of the State Entomologist of Colorado for the year 1924 is to hand and gives further information regarding the control of Codlin Moth in that area.

It states that in certain localities it is being controlled with two or three rather indifferently timed and applied sprays, while in others the most careful work and ever increasing number of applications of spray are not giving satisfac-

tory results.

The Apple growing industry in certain localities is threatened, the largest percentage of loss occurring in some of the most intensive fruit-growing sections of the State.

The life history work was carried out in the laboratory, and records made of banding, egg deposition, egg incubation, and moth emergence. Daily charts were kept, and spray dates deter-



mined. The spray schedule called for nine sprays in all.

Many growers used oil sprays in combination with arsenate of lead for killing the eggs of the Codlin Moth, but from observations made, and data to hand, it seems evident that the oil emulsions failed to give satisfactory results. Codlin Moth injury was much more common in Cherries, Apricots, and Peaches than the writer has seen before. **The personal equation is perhaps the one big factor that enters into the raising of clean fruit.**

The 1924 crop fell short of the 1923 crop by several hundred cars, because of greater worminess.

**The trapping of Codlin Moths** again proved successful, the writer stating that if this phase of control were systematically carried out by all growers, much good could be accomplished. Several aromatic chemicals were tried as attractants, and some show promise, such as:—

**Fermented Apple juice**, made by boiling one box of Apples in  $4\frac{1}{2}$  gallons of water for one hour; resulting liquid drawn off, and  $1\frac{1}{2}$  lbs. sugar added. When cool, several rotten Apples added to start fermentation.

**The band records** show a total of 2,119 larvae from seven Ben Davis trees.

In the breeding cages, the average number of

eggs deposited per female moth was 46.07 for the first brood, and 130.04 for the second and third broods combined.

**A harvest count of Apples** covering 21 orchards showed 80 per cent. clean fruit, 5.9 per cent. wormy, and 14 per cent. stung. Of a total of 2,079 worms, only 98 entered the Apple at the calyx.

The report concludes that of all the problems facing the fruitgrower, the Codlin Moth is the most important. It is not being successfully controlled by a majority of the fruitgrowers, and will not be unless more drastic or effective methods are employed.

In a personal letter, Mr. J. H. Newton, Deputy State Entomologist, Colorado, writes to Mr. J. H. Lang, of Harcourt (Vic.) thus:—"I hope you may interest your State authorities in carrying forth **life history studies** of the Codlin Moth, for it is **very important that each season's variations be worked out definitely, not guessed at**, as is often the case. When we first started the work here at Paonia, they were putting on one spray about the 4th July, or shortly thereafter. Life history data proved that they could not pick a better time at which to throw away a spray, for the broods do not overlap, and that particular time was just between broods, when most of the larvae were in the Apples."

The tabulated results show:—

| Days run.               | Moths. |         |       | Number of jars. | Solution used.                    |
|-------------------------|--------|---------|-------|-----------------|-----------------------------------|
|                         | Male.  | Female. | Total |                 |                                   |
| 1. May 17 to Sept. 3 .. | 128    | 325     | 453   | 5               | as above.                         |
| 2. May 17 to Sept. 5 .. | 151    | 329     | 480   | 5               | as in No. 1 with 25% water added. |
| 3. May 17 to Sept. 4 .. | 159    | 350     | 509   | 5               | as in No. 1 with 50% water added. |
| 4. May 18 to Sept. 5 .. | 350    | 392     | 742   | 5               | as in No. 1 with 75% water added. |

#### S.A. AGRICULTURAL BUREAU.

##### Annual Conference of River Branches.

The annual conference of the Murray River branches of the Agricultural Bureau assembled at Berri on May 19. The meetings this year were held under the auspices of the Lone Gum and Monash branch, and the chair was occupied by the President (Mr. H. March). The Central Bureau was represented by Messrs. F. H. Jones and H. S. Taylor and Assistant Secretary (Mr. F. C. Richards), others present included Messrs. Quinn and Laurie, of the Agricultural Department, Mr. Savage, Cr. Gordon, of the Mildura District Research Committee, Mr. Lyon of the Merbein Research Farm, and Mr. Vasey of Mildura. There was a fair muster of delegates, including seven from far off Mypolonga.

The delegates were welcomed by the Chairman. Mr. Taylor presented

apologies for the Minister and Director of Agriculture. The improved prospects of the fruit industry were touched on, and reference made to the need for organisation and control for Citrus export. He also dealt with the desirableness of a greater diversity of planting in the irrigation areas and the need for more extended scientific research into the problems of the irrigation areas.

Mr. F. H. Sharley (Berri) read a paper on "Advertising Fruit," for which he was warmly congratulated, and Mr. D. F. Laurie (Government Poultry Expert) delivered a very valuable address on "The Combination of Fruitgrowing and Poultry Raising." Mr. Laurie strongly urged the formation of a local branch of the Infertile Egg Association for the despatch of regular consignments of eggs to Adelaide. If this were done, and a sufficiency of eggs guaranteed, arrangements were in train for a weekly motor lorry service to the city for

the carriage of eggs and the return carriage of the poultry men's requirements.

Mr. A. V. Lyon, M.Sc.Ag., read a paper on "The Production of High-class Fruit." Numerous resolutions were discussed, and in the evening session, Mr. C. G. Savage (Deputy Horticultural Instructor and Manager of the Berri Experimental Orchard) read a paper on "Factors Which Influence Crop Returns." A meeting of delegates interested in the 1926 pruning competitions was held.



## FIGHTING INSECT PESTS IN THE ORCHARD.

### Pear Leaf Blister Mite (Phytoptus).

This is a troublesome pest of the Pear tree, and may do much damage. The chief damage is done to the Pear, but the Apple is occasionally attacked. When a Pear tree is infested the leaves will be spotted by small yellowish-green pimples. Sometimes these blisters turn pink or red. Later they are brownish and the whole leaf turns black and dies.

Spray at once with either lime-sulphur or oil emulsions.

### Orange Aphis.

These destructive insects are very numerous this season. The young shoots of Orange and Lemon trees are covered with them. They suck the sap from the shoots, causing them to turn black. These Aphids are small, dark-colored, not unlike in general appearance that of the so-called "Black Aphid of the Peach."

Thoroughly spray with nicotine sulphate or black-leaf 40.

Thin out branches where possible, burn all affected ones.

### Peach Aphids.

It is advisable to spray the trees with red spraying oil, 1 in 30, to destroy the eggs. For dealing with Peach Aphids after the trees are throwing out young shoots, make a spraying with tobacco wash—2 lbs. tobacco to 4 gallons of water. A reliable tobacco spray is made as follows:—Steep 1 lb. tobacco in 1 gallon of hot water, and allow it to soak for 24 hours. Boil 1 lb. of soap in 1 gallon of water until soap is dissolved. Strain tobacco water into the soap water. Stir well, and make up to 5 or 6 gallons. Use waste stems of tobacco.

Nicotine sulphate or Black-leaf 40 will also give excellent results.

### Apple Mussel Scale.

These scales are rather difficult to detect as their color resembles the bark of the tree on which they are attached.

Spraying with red oil—1 gallon of oil to 20 gallons of water should be done in winter. Later (usually about November) when young scales are hatching, use tobacco sprays as recommended for Peach Aphids.

### San José Scale.

Same remedies as for Apple Mussel Scale.

### The Vine Scale.

This is probably one of the largest scales known. Color of adult scale yellowish brown. Eggs cream colored. This scale also attacks Orange and Plum trees. It does considerable damage, especially to young vines. To destroy these scales cut away and burn as much of the old wood as pos-

sible, and then with a brush, well scrub the stem with benzole emulsion. Use Red oil or lime sulphur spray in winter to prevent eggs from hatching. In summer, when young are hatching, use any of the nicotine sprays. Burn all prunings.

### Woolly Aphis.

This destructive insect is becoming rather numerous in some districts at the present time. After pruning spray with nicotine sulphate and red oil.

To prepare sufficient mixture to treat 100 trees, 1 lb. soap should be boiled in a gallon of water till dissolved; add 1 gallon red oil and mix thoroughly; then add 1 pint of nicotine sulphate, and after mixing the whole for a few minutes, add 80 gallons of water. If the water is hard, a small piece of washing soda should be added. Later in the season orchardists should obtain a supply of the Woolly Aphis parasite (*Aphe-linus*) from the Agricultural Department. These insects are doing excellent work against these Aphids in many orchards throughout Victoria.

## UNSATISFACTORY EXPORT RETURNS.

### Organisation Needed.

Mr. R. E. Haysey, Narre Warren North, writes that exporters are dissatisfied with results coming to hand from overseas. The arsenic scare is partly blamed, but it is suggested that Apple growers should get together and organise thoroughly, whether they export themselves or sell to exporters, as the latter cannot afford heavy losses. It was pointed out during the recent strike in England that Australian primary producers were the only ones not represented there, this greatly handicapping the work of distribution.

"We have a big opportunity at the present time (if we are live men)," says Mr. Haysey, to form a strong body in the Apple growers' section of the Victorian Fruit Council, which will be a benefit to all in the industry.

They say that after the recent Fruitgrowers' Conference at Portland the symbol of peace should be no longer a dove, but a crayfish!

### "SULPINETTE" LIME SULPHUR SOLUTION SPRAY.

Manufactured by the proprietors of Cooper's Sheep Dip. Superior to other forms of Lime Sulphur owing to a special process of manufacture. It contains 25 per cent. sulphur in solution. Possesses extraordinary wetting and covering powers. Efficient, both as a fungicide and an insecticide. Prices: 40 gallon casks, 1/9 per gallon; 5 gallon drums, 2/3 per gallon.

Victorian Agents: NEWELL & CO. PTY. LTD., 189 King Street, Melbourne.

# IMPERIAL FRUIT SHOW

Holland Park Hall,  
London

October 29th - November 6th  
1926

First promoted in 1921 to foster the Imperial Fruit Trade, the Imperial Fruit Show is increasing in popularity yearly, and is now generally recognised as the annual show ground of all the progressive elements in the Empire Fruit Industry.

## £2,000 PRIZES FOR FRUIT GROWERS

Australasian growers will be interested in the competition for fruit grown commercially anywhere in the BRITISH EMPIRE.

Classes are provided for Apples, Oranges and Canned Fruits, for which £2,000 in cash prizes and trophies is offered.

A Special Challenge Cup is offered for the best exhibit of Oranges grown in the British Empire.

Schedules of Classes and Prizes can be obtained from

THE FRUIT WORLD  
PTY. LTD.

9 Queen St., Melbourne

Other enquiries relating to trade exhibits and rates for advertisements in the Show Catalogue should be addressed to

The Secretary,  
Imperial Fruit Show,  
18 Bedford Square,  
London, W.C.1.





## THE "Sunraysed" Courier

### DRIED FRUITS IN LONDON.

The Chairman of the Dried Fruits Export Control Board (Mr. W. C. F. Thomas) advises that cabled advice has been received from the London Agency of the Board intimating further sales of new season's Australian dried fruits. The sales recorded with the Agency for the period ending May 20, represent 115 tons of Sultanas, the prices ranging from 68/- to 83/- per cwt., while 90 tons of new season's Currants have been disposed of at prices ranging from 40/- to 54/- per cwt.

Owing to the recent industrial trouble in Great Britain, the market is opening slowly, but there is a confident tone, and as soon as fuller deliveries ex ships now in London are available, larger parcels will be disposed of.

In addition to the foregoing advice, the London Agency has advised the Board of the sale of approximately 75 tons of old season's fruit at varying rates. The quantity of last season's fruit still unsold in Great Britain is reported to be less than 200 tons, of which the greater portion represents Sultanas, which are making from 60/- to 65/- per cwt.

Accordingly the market for new season's fruit will not be hampered by reason of any substantial carry-over. The Chairman of the Board expressed his view that the greater care in the preparation of this season's fruit was being amply repaid, and while it is far too early to indicate the course of the market for Currants, it is hoped that the returns will be much more satisfactory than the low prices which ruled for this fruit last season.

### INTERSTATE DRIED FRUITS EMBARGO.

Western Australian growers of dried fruit have questioned the right of the Victorian Dried Fruits Board to prevent the entry of fruit from New South Wales and Western Australia. Agents had been warned that

they took considerable risk in buying Western Australian fruit, and consignments had been seized.

Mr. J. M. Balfour, Chairman of the Victorian Dried Fruits Advisory Board, stated to the press that only 25 per cent. of the dried fruits produced could be consumed in Australia, it being necessary to export the remainder. In Victoria and South Australia there was legislation empowering the respective State Dried Fruits Advisory Boards to fix a Commonwealth and an export quota, so that growers would receive equality of treatment regarding the Commonwealth and overseas market. The Commonwealth market was very much higher than the overseas market, with the result that New South Wales and Western Australia, which had no dried fruits legislation, sold the whole of their crops in the Commonwealth. Growers in Victoria and South Australia by exporting 75 per cent. of their crops, were creating a market for growers in Western Australia and New South Wales.

"I have recommended the Ministry," stated Mr. Balfour recently, "to acquire all dried fruit sent into Victoria from Western Australia and New South Wales, because it has not been subject to an export quota. Victoria is able to take that action under the existing legislation. It is not a question of the restraint of the trade."

### ABSENCE OF GRUBS IN CURRANTS.

Mr. Alfred E. Lloyd, senior supervisor of dried fruits in charge of the Mildura district, stated on May 22, says the "Sunraysia Daily," that in making tests at the different packing-sheds it was discovered that there was an almost entire absence of plodia (commonly known as grub) in Currants. Compared with last year, when similar tests were made, this was most marked. It would be interesting to know whether this fact had also been noted in other dried fruit districts.

### HIGH QUALITY OF AUSTRALIAN DRIED FRUIT.

In a recent statement, Mr. W. W. Waite, the head of the great London wholesale and retail concern of Waitrose Ltd., said: "Australian Currants, Lexias and Sultanas contain a greater percentage of sugar than the Mediterranean products, and, therefore, have greater nourishing properties. Without doubt, the Australian Sultana is superior in every way to the Sultana grown in other countries. In a normal season, the Australian Currant compares favorably with the Mediterranean, but there is room for improvement in the grading of the Australian Currants, likewise the Sultanas and Lexias. Although the Australian Raisins are not so pleasing to the eye as Valencias, the flavor is better, and the nourishing properties are greater. The Australian Raisins are placed before the public in their natural condition; Valencia Raisins are often sulphur bleached and treated with oil."—"Sunraysia Daily."

## Obituary.

### Mildura's Grand Old Man.

Mr. W. B. Chaffey, C.M.G., died from a sudden heart seizure while attending to business at the Merbein Distillery on Friday, 4th June.

As all Dried Fruit growers are probably aware, the late Mr. Chaffey was the founder of Mildura, and it can confidently be said the founder of the Australian Dried Fruits industry.

For a period of twenty years Mr. Chaffey was the guiding spirit of the Australian Dried Fruits Association, and it was only on account of failing health in 1923 that he was forced to retire from the position of President. During this period Mr. Chaffey established a very high reputation in the business circles of Australia.

Amongst growers his presence was an inspiration, and gave them confid-

ence in the Association which was so fortunate to secure the services of a man who commanded the respect of all whom he met.

Upon relinquishing office, Mr. Chaffey did not lose interest in affairs, his intellect retained its keenness until the last, and he gave willingly the advice that was freely sought by his successors.

Personally, Mr. Chaffey had a lovable nature, and his loss will be keenly felt by a very large circle of friends. We extend our deepest sympathy to Mrs. W. B. Chaffey and family.

#### REPAYMENT OF DRIED FRUIT ADVANCES.

During 1924 the Commonwealth Government, with the authority of Parliament, made advances to the growers of Currants, Sultanas and Lexias to the amount of £199,243. The advances were made on the quantity of fruit exported during 1924, at the rate of £9 per ton for Sultanas and Lexias, and £1/10/- per ton for Currants; 2,870 growers availed themselves of the advances, without which many of them would have been unable to remain on their holdings owing to the very low prices obtained in the overseas markets during the previous seasons.

The advances were to be repaid out of the profits of the 1925 crop, in the production of which the money was to be expended. Despite the activities of the Dried Fruits Export Control Board, the prices secured for Currants and Lexias were unsatisfactory. The Dried Fruits Advances Act has now been amended, enabling the repayment of the advances to be deferred until the 1926 and 1927 crops have been disposed of, and providing for the appointment of a Board to consider applications for relief from growers. The Board consists of Mr. R. McK. Gollan, inspector of excise, South Australia and sub-collector of customs, Adelaide, Chairman; Mr. H. Souter, officer of the Department of Markets and Migration, and Mr. P. Malloch, managing-director of the Irymple Packing Company Pty. Ltd., of Irymple, V., who will act as the growers' representative. The Minister for Markets and Migration will arrange for the Board to meet at a very early date to determine the procedure to be followed, and the nature of the form to be lodged by growers who desire relief from repayment. The time for lodging applications will expire on September 1 next. The Board will then deal with the applications, so that each grower may know his position as soon as possible in regard to his liability to the Commonwealth.

#### NO PROFIT IN EXPORTED PRUNES.

##### Large Increase in Production.

Speaking in the Land Valuation Court at Griffith, N.S.W., on June 18, Mr. E. Herrod, Secretary of the Prunegrowers' Association, Central Citrus Association, and the New South Wales Fruitgrowers' Federation, said that Prune prices were rapidly falling. Last year the consumption in the Commonwealth was 600 tons, and the production was slightly less. According to statistics,

3,000 acres would be coming into bearing, and the estimated production of 3,000 tons would then be vastly in excess of the home consumption. Australian fruit could not profitably be exported. The huge rate of American production, three or four tons an acre against the Australian one ton an acre, enabled American fruit to be produced at a much lower cost.

#### His Lucky Night.

Rastus was sporting proudly a new shirt, when a friend asked, "How many yards does it take for a shirt like that?"

Rastus replied: "I got three shirts like this out of one yard last night."—"The Pathfinder."



["Dried Fruit News" photo.

The A.N.A. "Australian Made" Exhibition, held at the Exhibition Buildings recently, was very successful.

In conjunction with the Victorian Board, the Association placed an attractive exhibit there, showing all varieties of dried fruits and the various lines, Raisin Syrup, Raisin Butter, Prune Spread, etc.

The Exhibition was well patronised by the public, and an excellent advertisement obtained, sales being made freely.



# Victoria.

Crop Reports.

Growers' Conferences.

News and Notes.

The report of the Horticultural Section of the Department of Agriculture for May is as follows:—

## Deciduous Fruit.

Whilst Apples and Pears were hardly equal in size to that of other years—due to the dry summer—the crop on the whole was very fair, and is keeping excellently. Where thinning was practised in favoured localities, there is a very fine crop of Yates. This variety, together with Rokewoods, are being sent to the cool stores for marketing later in the year.

The amount of fruit in cool stores is about equal to that of other seasons for this period of the year. Nevertheless, Tasmanian growers are shipping consignments of Apples to Victoria, which naturally leads one to believe that Victoria has a short crop.

During the export season 502,205 cases of Apples and Pears were shipped to overseas markets. The prices for these fruits in Victoria are decidedly good, and, speaking generally, growers have had, or are having, a successful season. This applies to all classes of deciduous fruits.

## Viticulture.

Vintage is now finished in the different branches of the vine industry, with the exception of a few Ohanez, which are still to be seen in the fruit shops.

The weather in the beginning of the month was very cold, though few really severe frosts have occurred. The latter part of the month has been mild, cloudy and showery. The autumn has been a very favourable one for the sowing of cover crops.

The vines are holding their leaves very late this season. There has been, however, an absence of late autumn growth: the wood is ripening under favorable conditions, such as should provide for a good show of fruit next spring. After the deficient rainfall of last season, good rains will be welcome to well moisten the sub-soil. The season so far is very promising in this respect.

## Citrus.

The Orange crop is now ripening, and already Navel type of Oranges are being marketed. Growers, despite the legislation, are, in a few instances, forwarding green coloured fruit to the Melbourne market; also

green Lemons—many of these coming across from South Australia.

Weather conditions for the past month have been good.

Fumigation is now practically completed for the season, and altogether 130 groves have been treated with a total of approximately 30,000 trees. The kill of scale is very satisfactory.

## UNITED BERRY GROWERS' CONFERENCE.

The Sixth Annual Conference of the U.B.G.A. was held at Silvan on Tuesday, May 25, Mr. Valantine (Mt. Dandenong) presiding. A goodly number of delegates from each branch attended and keen interest was shown throughout.

The Directors' report showed that, although the season was one of the worst, growers have experienced for a number of years in the matter of adverse weather conditions, good progress has been made, there being a decided beneficial effect on the marketing of crops, which of course benefited outside growers as well as members.

During the season an additional distributor, Mr. H. T. Mason, of West Brunswick, was appointed to operate in the N.W. suburbs.

Some few complaints were reported as to fruit arriving in damaged condition, and a great deal of time and thought was devoted as to how best to alter things so that there could be no possibility of any such complaint occurring again.

The country canvas did not show a profit, and a recommendation from the Directors as to the future conduct of the Association was postponed, as it was felt that unless unity with other interested bodies was arrived at, the same difficulty would occur from year to year. In the meantime an effort is to be made to arrive at some amicable agreement with other societies.

Keen regret was expressed at the resignation of the President and Secretary, both of whom have done yeoman service for the industry.

Officers elected for ensuing year included:—President, Mr. Jones; Vice-President, Mr. F. Budden; Secretary, Mr. J. M. Mitchell; Treasurer, Mr. Len Bunt; Delegate to Fruit Advisory Board, Mr. Jones.

## TRESCO CROP REPORT.

Mr. J. P. Greenwood, Tresco, reports:—1,250 tons of Doradillos have been despatched from Tresco this season. Harvesting operations now being completed.

Citrus Packing is about to commence, the crop being estimated at 20,000 cases; owing to the light crop the size of fruit is on the large size.

Growers of Dried Fruit who were unfortunate enough to have some of their fruit deteriorated owing to the heavy rains, are waiting receipt of work from State Rivers and Water Supply Commission respecting the despatch of this fruit to the distillery for distillation.

## SHIPMENT OF OHANEZ GRAPES.

The Ohanez Grapes shipped under the auspices of the Victorian Department of Agriculture arrived home safely and realised satisfactory prices. Cases containing 25 lbs. realised 15/- to 19/- a case, and 33 lbs., 17/- to 22/- a case. Probably the most important factor was the discovery that the cork dust in which the Grapes are packed had previously been affected with a destructive fungus disease. In the recent successful shipment, the cork dust was sterilised, with the consequence that the fruit arrived in England in perfect condition.

## VENTILATED FRUIT CASES.

134 cases of Ohanez Grapes shipped through the Department of Agriculture were in "Climax" patent export fruit cases, the feature of which is the uniform ventilation of the cases by means of studs, so that every case is kept 3-inch apart from its neighbours.

The barrels used by Spain and other countries get ventilation.

## BULK LOADING OF FRUIT.

Speaking at the recent Victorian Fruitgrowers' Conference at Portland, Mr. D. G. Wills, the Sydney Market Representative of Northern Victorian Fruitgrowers, said that by organising the despatch of supplies, the annual saving to growers for the past six years has been at least £5,000 per annum. In addition, the delivery of the fruit in better condition, and the saving of handling were of even greater value. Mr. Wills urged that Victorian Cool Stores Associations and district groups should also organise the despatch of supplies to effect similar savings.

**APPLE AND PEAR GROWERS.**

The Apple and Pear Growers' Association of Victoria was launched at a meeting held at Melbourne on June 22, presided over by Mr. J. H. Lang (Harcourt). It was decided that membership should consist of district associations, cool stores and packing sheds, paying an individual subscription of 5/- for each of their members. Office-bearers were elected as follows:—President, Mr. J. H. Lang; Vice-president, Mr. J. W. Bailey; Secretary and Treasurer, Mr. R. E. Boardman; Committee, Messrs. W. James, H. J. Willoughby, M. Jones, F. Thomas, W. H. Carne, W. L. Williamson; delegates to the Victorian Fruit Council, Messrs. J. H. Lang, J. W. Bailey and F. Thomas.

**FRUITGROWERS' DEPUTATION.**

A fruitgrowers' deputation waited on the Hon. J. E. Mackrell, Honorary Minister (in the absence of the Minister for Agriculture, Colonel Burchier), submitting the resolutions from the Portland Conference. The deputation consists of Messrs. G. E. Mock, J. H. Lang, J. W. Bailey, J. Tully and R. E. Boardman.

The deputation requested increased research into pest problems, the re-enactment of the Fruit Act 1918, pending the establishment of the Rural Bank, experimental orchards, and the recognition of the new Fruitgrowers' Council, when established, to replace the Advisory Board. Mr. Lang asked for the renewal of the promised freight subsidy on a shipment of fruit to China. It was further stated that in view of the importance of the horticultural industry, Conference had decided to request that there should be a Director of Horticulture, who would be responsible for the Minister.

Mr. Mackrell said the requests would be placed before the Minister speedily, and the Rural Bank would be established at the earliest opportunity.

**METROPOLITAN FRUIT-GROWERS.**

The annual meeting of the Metropolitan Fruitgrowers' Association was held at Box Hill on June 15, Mr. J. Tully presiding. Mr. W. H. Everard, M.L.A., said that if the funds from the proposed Orchard Registration Bill were to be used for financing the Advisory Board, he would oppose the measure.

The report of the Secretary (Mr. Aspinall) outlined the useful work accomplished, especially in the development of kerb markets. It was decided to support the opening of the

Victoria Market at 6 a.m. instead of 4 a.m., and the closing at 9 a.m. instead of 8 a.m. Mr. G. B. Minns, Market Superintendent, attended, and said that the Market Committee would pay close attention to any requests from the growers for amended marketing hours.

A meeting of fruitgrowers, convened by the Metropolitan Fruitgrowers' Association, was held at Box Hill on July 24th, Mr. J. Tully presiding. The meeting was well attended.

It was decided, on the motion of Messrs. Lipscombe and Wallace, that the Metropolitan Section of the Fruitgrowers' Council be formed, membership being open to fruitgrowers' associations, cool stores, and packing shed companies, paying an

**ORCHARD REGISTRATION.****Opposed at Geelong.**

Growers in Conference at Portland recently, reaffirmed the necessity for legislation providing for orchards to be taxed at a nominal fee to raise funds for organising purposes and the development of markets, the money so raised to be used in the sections which contributed the same.

A meeting of fruitgrowers in the Geelong district was held on June 10, convened by the Hon. H. F. Richardson, M.L.C., and Mr. James MacDonald, M.L.A. There were 30 growers present, Mr. E. Hobbs presiding. The circular calling the meeting stated that "a proposal has been made



Picking Black Diamond Plums in Mr. G. T. Herbert's Orchard, Diamond Creek, Vic.

affiliation fee of 5/- for each of their individual members. Office-bearers were elected as follows:—President, Mr. J. Tully; Vice-President, Mr. R. M. Finlay; Committee—Messrs. C. Wallace (Wantirna), W. Lipscombe (Croydon), L. Pepperell (Mt. Waverley), A. McCully (Wandin), J. Stevens (Blackburn); Secretary, Mr. J. W. Aspinall, Victoria Market Committee—Messrs. G. Mock, J. W. Aspinall; delegates to Council—Messrs. Tully, Finlay and McCully.

It was decided that the Executive confer with the Executive of the previously established Metropolitan Association with a view to taking over and carrying on their work.

that Parliament should be asked to pass legislation providing that every orchardist in the State should pay an acreage tax to be used to promote production and sale of fruit." Growers voted against the proposal, objecting to the creation of jobs and "fat billets." Mr. E. Weitnauer explained the proposals as expounded at the Portland Conference, but was outvoted.

The man who acts without thinking usually finds someone else doing the job after him.



## SOIL BACTERIA

The Orchardists' Friends.

(By F. Thomas, M.A.)

The following valuable paper, by Mr. F. Thomas, M.A., of Bunyip, was one of the many read and appreciated at the Victorian Fruitgrowers' Convention recently held at Portland. Mr. Thomas said:—

**W**E hear so much of the harmful action of certain bacteria in disease, that we are accustomed to think of them only as enemies. Very terrible enemies they are, when they take possession of our bodies, but we must not forget that there are many species that are helpful. In fact, some of them are so important that without them, life, as we know it, could not exist.

### The Uses of Bacteria.

They are of great value in the arts; in the decomposition of jute, hemp and flax; in the fermentation of lactic acid, and the production of vinegar. Men have learnt to use them in the curing of tobacco, while in the ripening of cream and the flavoring of butter, they are of daily use to the dairy industry. They are, however, of supreme importance in agriculture.

They have been well known, and intensively studied only since the days of Louis Pasteur, the eminent French chemist, who in 1866 found that they were responsible for the formation of lactic acid and vinegar. A little later his studies in anthrax, the dreaded cattle disease, showed to medical men the importance of bacteria in disease.

### What Bacteria Are.

A few facts about them may be interesting. They are microscopic plants, and are found all over the earth and in the seas. They may be roughly divided into three groups, the spheres, the rods, and those that are of spiral shape. They are so small that it takes about 10,000 of them to cover an inch. They increase by simple division. Some divide every half-hour. Such a bacteria would have at the end of 24 hours sixteen and a half million descendants. They would occupy about a pint, and weigh about a pound.

We sometimes wonder how it is that the earth has supported so many plants and animals for millions of years without becoming exhausted. The explanation lies in the fact that plants and animals are mutually supporting. Plants provide food for animals, and the animals in turn produce carbonic acid gas from which

the plant obtains the carbon to build up its woody structure, and to assist in forming the sugars and starches that feed both the plant and the animal.

But the cycle is not yet complete. In all organic bodies the most important elements are carbon, oxygen, hydrogen and nitrogen. We have not yet accounted for the nitrogen, and this is where the bacteria come into play.

There are friendly bacteria in the soil, that help to maintain its fertility.

Bacteria are microscopic plants, found all over the earth and in the sea. They act in the decomposition of waste matter, producing ammonia.

Nitrogen is one of the essentials of plant food. The ammonia is converted into available nitrates by the nitrifying bacteria in the soil.

The growth of legumes helps the work of the nitrogen-fixing bacteria. These bacteria can only work in sweet, well-cultivated soil.

### Nitrogen.

In all fertile soils nitrogen is present in the form of nitrates. A common nitrate is saltpeter. Another one is nitric acid. These nitrates are soluble, and are thus available for plants. The plants build them up into what are called proteids, found in all grains and particularly in Peas and Beans. Animals eat these matters and the nitrogen obtained is converted into flesh and blood, or returned to the soil in the form of urea.

The urea is then seized upon by one of the groups of bacteria in the soil, and decomposed into simpler compounds, the main ones being water, carbonic acid and ammonia. When the animal dies the same bacteria attack it and resolve it into the same, among other, compounds. If it were not for these bacteria, bodies would not decompose. They would simply accumulate.

From the point of view of the farmer, another product of decomposition is important.

### Ammonia.

We have already mentioned ammonia as one of the products of the decomposition of organic matter.

Ammonia contains nitrogen, but not in a form readily available for plants. Other substances usually formed at the same time are known to chemists as nitrites. They also contain nitrogen, but have to be converted into nitrates before plants are able to use them.

There are, however, in the soil certain organisms known as the nitrifying bacteria. There are several groups of these having different functions, but the final result of their activities is to convert ammonia and the nitrites into nitrates. Experiments show that no single group can complete the work. It seems to be carried on in stages, but at last the nitrates appear, and the cycle is complete.

There are many ways, however, in which nitrogen is lost from the land.

1. Nitrates from the earth are used up in explosives.

2. There is the loss from the soil in drainage, for all nitrates are soluble.

3. When plants and animals are swept away to sea, the soil loses the nitrogen they contain.

4. There are heavy losses when sewage runs away to sea.

To balance these losses we use fertilisers, and in England, U.S.A., Italy and Germany nitrates are now made by chemical means from the air. These are costly, and we have in the soil bacteria which will do the same work for us for nothing, if we make the conditions suitable for them. These are known as

### the nitrogen-fixing bacteria.

One kind which is now well known works in conjunction with legumes, and the prevalence of these plants in Australia, may be responsible for the fact that the addition of nitrates to the soil does not always give the marked improvement that is found in other countries.

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**MELBOURNE**  
And WESTERN MARKET.

We are all familiar with the nodules found on the roots of Peas and Beans, and on those of our Wattles and other Acacias. These nodules contain colonies of bacteria. They work in partnership with the plants, giving in return for certain food-stuffs, the nitrates that are necessary for the full development of the plant. Any soil that has carried a crop of Peas or Beans is found to be rich in nitrogen, and this is one of the reasons why we grow such cover crops in our orchards.

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Still, other crops of bacteria can fix the nitrogen of the air without the assistance of the plant, if we make the conditions favorable for them.

What conditions do they demand?

1. They must have a good supply of oxygen, moisture and warmth. These conditions are supplied by the frequent and thorough cultivation of the soil, the addition of refuse matter to supply humus, and, above all, careful attention to drainage.

2. The soil must be neutral or slightly alkaline, therefore lime is necessary.

It is important to remember that there are some bacteria that can undo this good work, the de-nitrifying bacteria. These live in sour, wet soils.

One method of inoculating soils with our friendly bacteria is to scatter rich soil over the fields. This has proved very successful in parts of Germany and Ireland. The organisms seem to relish a change of surroundings and help to produce heavier crops. It should be worth a trial on some of our poorer orchard land, especially where the trees have been growing for many years.

### APPLE CULTURE IN VICTORIA.

A useful book for orchardists is entitled "Apple Culture in Victoria," by J. Farrell, Orchard Supervisor, which, with slight alterations and additions, is a reprint in handy form of a series of articles originally published in the journal of the Department of Agriculture between August, 1916, and August, 1919. The book is well illustrated from photographs and diagrams, and deals with laying out and planting the orchard, propagation of young trees, pruning, sheltering the orchard, the function of the roots and leaves, pollination, varieties, management of soils, drainage, irrigation, insect pests and fungus diseases, cool storage of fruit, and grading, packing and marking of fruit for market. The author has dealt with his subject exhaustively, and the diagrams and illustrations make the various points clear. In the foreword he says:—

"For many centuries the Apple has been the most extensively grown, and the most prolific and profitable of our cultivated commercial fruits . . . During the long period throughout which the Apple has been in use, it has, compared with other fruits, had no equal as a tonic, food and blood purifier.

"Since the Apple was introduced into Victoria the area under its cultivation has steadily increased from year to year, until its production has become one of our chief national industries.

"A ripe Apple contains acid, sugar, fat, lime, phosphorus, protein, carbohydrates, magnesia, etc. The proportions, beautiful combinations, and blending of these chemicals, as in the Apple, constitute a food which is procurable only through Nature's dispensary."

Even experienced Apple-growers should find much of value in this book. In conclusion the author says:—

"Fruit-growing is one of our staple industries, and, if our oversea trade

expands as it should, the possibility of ever widening extension is great. But it is an industry that can be carried on profitably, and in the best interests of the State only by the orchardists possessing a high standard of horticultural knowledge, and by the application of constant and strenuous toil."

The price of the book is 2/8 in paper cover, 3/9 in cloth, including postage, and copies are obtainable from the Department of Agriculture, Melbourne.

## T. STOTT & SONS Fruit Merchants

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**PRESENT FOR KING GEORGE.**

**Fruitgrowers Send Birthday Cake.**

**On the Occasion of His Birthday on  
June 3.**

His Majesty the King accepted from the High Commissioner of Australia (Sir Joseph Cook), on behalf of the Australian fruitgrowers, a birthday cake made entirely from Empire produce.

The paper comes regularly, and is much appreciated.—A. V. Mills, Berri, S.A.



## The Portland District

Profitable Orchards at Gorae.

15,000 Cases Cool Store on Direct Expansion System.

**D**URING the recent Conference of Victorian Fruitgrowers at Portland, opportunity was taken to visit the cool store at Gorae.

### The Store Described.

The store contains three chambers, nine cases high; and has a capacity of 15,000 cases. A trial was made of a large chamber, 28 feet by 44 feet, and it gave every satisfaction. After lengthy enquiry, the promoters decided that the direct expansion system was the best, although in this the Departmental opinion was against them. They have found it satisfactory in every way—simple—cheaper than the other, and very efficient. By this system, the brine tank, with attendant troubles and expensive air ducts, are done away with. It is really a simple pumping system.

The liquid ammonia, when passed into the coils in the chamber, expands into gas; and in so doing, brings down the temperature of the pipes much below freezing point; with the consequence that the heat of the chamber is taken up by the gas and carried off. The compressor pumps this back, and compresses the gas from 25 to 125 lbs. to the square inch. This compressed gas then goes through the condenser coils to be cooled and reverted back again into liquid ammonia, which is then sent again through the chamber coils.

This circulation is continued as long as may be necessary to bring down the chamber temperatures as may be desired. To the layman the system appears to be as near fool proof as possible. Messrs. Werner supplied the whole of the refrigerator plant with every satisfaction to the owners. The four growers owning the store found that State help existed only in theory, and not in fact, and had to build the store out of their own resources.

Around the store portion, a verandah, over 200 feet long and 16 feet wide, provides ample packing accommodation. Although so far from the store centres there are quite a number of things that others might well note. All the truck wheels are rubber tyred—there are no windows. Instead of these, and supplied at a fraction of the cost, is a continuous line of panes of glass sixteen inches high, and overlapping. They rest in a small ledge at the bottom, and under the weather board at the top.

The light is thrown where wanted, and cannot be blocked up.

Last season the results of storage were extremely satisfactory, and there was practically no loss. Baskets are placed on the floor and between cases at intervals in stack. Ventilation, and plenty of it, is believed in. The temperatures are not



Top.—Cool Store at Gorae, Vic., holding 15,000 cases. The lower picture —Railway trucks with 5,000 cases loaded for export.

brought down too fast at first. The maximum now is 35, and from now on will be 34. Even a temperature below freezing is not feared. Last season, through cases getting into touch with piping, a number were frozen together into a solid mass, but the Apples were quite all right when the cases were crowbarred apart.

The cool store was erected by private enterprise, the moving spirit in undertaking the enterprise being Mr. W. J. Williamson, of Portland.

### Orchards at Gorae.

There are between 300 and 400 acres of orchard in the Gorae district, the principal Apple varieties being Rome Beauty and Jonathan. Sturmers also do well, and Delicious is rapidly growing in favour. The orchards are very productive, and the quality of the fruit is excellent.

### NEW STOCKS FOR APPLES.

Experiments have been conducted for some time by Mr. P. H. Thomas, Tasmanian Government Fruit Expert, with a view to discovering new stocks for Apple trees, which would be resistant to blight. A variety of the wild Apple, *Pyrus malus baccata*, known as the Siberian Crab, has proved very satisfactory, Apples on this seedling stock being better than on the Northern Spy. A new seedling, however, has been developed which is even better. This is *Neidwitz gledeiana*, a flowering Apple producing a small round red Apple;

the wood of the tree is also red. The seedlings throw 90 per cent true to type, and it is a good stock for propagation. The parent variety has been inoculated with woolly aphis, and it proved immune. Mr. F. Walker, of Lalla, Tasmania, has the seed, and is working up a big stock. This is also a crab Apple.



GIBBS, BRIGHT & CO.—See Page XIV

# Tasmania.

Export Shipments :: July Cultural Notes

## JULY ORCHARD OPERATIONS.

(By P. H. Thomas, State Fruit Expert.)  
Pruning.

This should now be well advanced, and every opportunity taken to complete operations before the first sap movement commences, especially amongst the earlier blossoming stone fruits.

In young trees the aim is to build up a strong framework, shortening the leaders according to the growth and desired direction of development.

### TASMANIA

We are the Leading Australian Firm of  
**FRESH FRUIT EXPORTERS, JAM MANUFACTURERS (IXL Brand), FRUIT CANNERS, HOP FACTORS** (owning the largest cool stores for this purpose in the Commonwealth).  
Supplies of Corrugated Straw-board, Genuine Sulphite Paper, Nails and best Packing Materials available at all times.  
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Varieties that are known to be of the spreading order should be encouraged to develop an upward growth, whilst those inclined toward vertical development should be trained as horizontally as possible.

In order to carry out pruning satisfactorily it is necessary that a knowledge be possessed of the tree's bearing habit. This is especially necessary with the Apple. There are many kinds grown, and a number possess peculiarities that must be fully taken into account when treating them. Some varieties such as Jonathan, King David, Fameuse (Pomme de Neige) and Delicious are essentially of lateral bearing habit, whilst others, such as Sturmer, Dunns and Crofton, are more inclined to carry their fruits on short spurs.

The operator should remember that every cut that is made upon a tree should have a desired object, viz.:—The production of fruit-bearing wood, or the training and develop-

ment of the trees. If this object is not attained it is foolish to persist in the method. Young trees which are making very vigorous growth require liberal treatment. Hard cutting in cases such as this will only accentuate the condition, whilst if the leaders are only moderately shortened and plenty of laterals left in the tree, it will soon settle down and bear satisfactory crops.

### Cultivation and Manuring.

As soon as the soil is in suitable condition the early spring ploughing may be commenced. Slow acting manures such as blood and bone, bone meal, and the various orchard fertilisers may be applied at this operation, if not put on the preceding autumn. The quicker acting chemical fertilisers such as sulphate of potash, nitrate of soda, etc., are better left until later in the spring, especially in light sandy soils situated upon undulating ground.

Green cover crops should not be turned under until a good top growth is obtained. Many of these that have been sown late will not make much development until September and October, and growers would be advised to defer ploughing for a few weeks to secure the additional benefits.

### Planting.

New plantings or extensions of fruit areas may take place any time this month if the site is properly drained. Should this not be effected it is better to postpone the work until later in the season, the young nursery trees being very subject to the influences of water seepage or excessive moist conditions.

When planting, trim off all broken or bruised roots and set the trees at about the same depth as they were growing in the nursery. The soil should be packed or tramped around the roots as tightly as possible. This is important and ensures an early and strong development of roots and branches.

### Spraying.

Toward the end of the month, preparations may be made for the application of sprays that are effected during the dormant period.

Strong contact insecticides such as red oil or lime sulphur may be applied where necessary, especially upon the early blossoming stone fruits.

The Black Cherry aphid has been particularly troublesome during the past season. This aphid over-winters in the egg form upon the branches of affected trees, and it is necessary to apply a strong oil emulsion (1-15) at the dormant stage in order to control infestation.

During the past few seasons experiments have been conducted in respect to manurial spray treatments upon varieties which are weak in setting their fruits and good results have been obtained in many cases.

The spray is applied in the form of a nitrate of soda-caustic soda mixture, 50 lbs. of nitrate of soda being dissolved in 50 gallons of water, to which is added 5 lbs. of caustic soda. The trees should be thoroughly drenched with the mixture, which must be applied in the dormant season as it is injurious to fruit and foliage.

The foregoing notes are issued monthly, and are primarily intended

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to keep the orchardist in touch with the essential requirements in the production of his crops.

Detailed information in regard to any treatments may be received upon application to the Fruit Division, Department of Agriculture, Hobart and Launceston.

### TASMANIAN ORCHARDIST BELIEVES IN NITROGEN.

What Tasmanian orchardist has not heard of Alf. Thiessen, and his productive little orchard at Geeveston, claimed by many to be easily the best yielding orchard in Tasmania, if not in the whole of the Commonwealth. A believer in fertilisation on a liberal scale, Mr. Thiessen makes a point of applying two cwt. of sulphate of ammonia per acre every year, and reckons that though his use of super., blood and bone, potash, lime and sulphate of iron is very essential to per-



manent soil fertility, he cannot manage without soluble nitrogen. Mr. Thiessen says that any trees that, through past years of heavy bearing, languish or stagnate, respond markedly to the application of sulphate of ammonia, putting on young wood, and generally passing through a process of rejuvenation, which is truly reflected in their crops. The Apple tree, he says, requires nitrogen, not only for the sake of the tree itself, but for the fruit as well, and is confident that the value of his two cwt. application of sulphate of ammonia has been properly proved by the extra

Diogenes, 51,290 cases, discharging at Liverpool; S.S. Ormuz, 11,748 cases, S.S. Barrabool, 50,562 cases; S.S. Hobson's Bay, 9,140 cases, all discharging at London. The last shipment left Hobart on 29th May.

Mr. P. H. Thomas, Tasmanian Government Fruit Expert, gives the following summary of this season's export:—

|                                           | Cases.    |
|-------------------------------------------|-----------|
| Export from Hobart . . .                  | 1,742,669 |
| Export from Beauty Point                  | 334,412   |
| Total Export from Tas. .                  | 2,077,081 |
| Add inter-state exports to date . . . . . | 524,170   |
| Grand Total . . . . .                     | 2,691,251 |

#### PERSONAL.

By the s.s. "Tahiti," outwards from Sydney on June 17th, left Mr. R. L. Tombs, of Tombs and Howcroft Pty. Ltd., cannery engineers. Mr. Tombs is visiting California with the object of keeping abreast of the latest developments in can-making, fruit processing and related departments of the food preserving industry. He expects to be back in Melbourne early in September.

We are advised by the Superintendent of Horticulture (Mr. J. M. Ward) that recent changes in the organisation of the field staff of the Department include the transfer of Mr. G. H. B. Davidson from Mildura to Gippsland; Mr. F. J. Greateorex from Shepparton to Doncaster; Mr. L. Pilloud from Gippsland to Shepparton; and Mr. A. A. Hammond (now Senior Orchard Supervisor) from Doncaster to Mr. Davey's district, West Bourke (Werribee, Newnham, Woodend and Bacchus Marsh).

Mr. C. H. Katekar, one of our leading Citrus growers, left for California on April 14. As a result of his visit much useful information regarding Citrus operations in that country should be available to Association members.

#### TASMANIAN DIRECTOR OF AGRICULTURE.

Out of 26 applicants, Mr. Frank Ernest Ward has been appointed to the position of Director of Agriculture in Tasmania, at a salary of £750 a year. Mr. Ward, who is 37 years of age, is a native of Hobart, where he was educated. For the past six years he has been employed in the New Zealand Department of Agriculture as instructor in agriculture. He holds the diploma of agriculture of the Hawkesbury (N.S.W.) Agricultural College and the Burdekin silver medal. Among the different positions

held by him was lecturer in agriculture, including live stock, horticulture, agricultural chemistry and dairy science, at the Seddon Memorial College, Auckland. He also took lectures at the Auckland University College. He administered the New Zealand Government's seed wheat scheme, and controlled the examination of Potatoes exported to Australia last year. He has carried out exhaustive investigations on crop diseases with the Department's mycologist and entomologist.

Mr. Ward is a returned soldier, and during 1918 and 1919 was in charge

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quality of what he considers already good fruit.

Mr. Thiessen's method is to apply the sulphate of ammonia and work it well into the soil just when the fruit is beginning to set. Yields of Apples have been on the up-grade since the introduction of sulphate of ammonia, five years ago, into an already liberal programme of fertilisation.

#### FRUIT EXPORTS FROM TASMANIA.

During the general strike in England, shipments were interrupted, but after the strike shipping was resumed, the last four boats being:—S.S.

## R. JOEL & SONS

16, 17, 20 RUSSELL ST.  
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of the N.Z. Expeditionary Force School of Agriculture at Torquay, England. He is noted for his administrative ability. The appointment has given general satisfaction in Tasmania.

#### COUNCIL OF SCIENCE AND INDUSTRY.

The newly constituted Council of the Institute of Science and Industry has now been formed, embracing technical men of wide experience. It is expected that the Council will function in a very effective way in regard to research work.

**CANNING FRUIT CONFERENCE.****Growers Want £12 a Ton.**

That the minimum price for canning fruit next season should be £12 per ton at canneries or loading stations, was the opinion very generally expressed at the Annual Conference of the Australian Canning Fruit-growers' Association, held at Tatura on June 11. There was a representative attendance of delegates from New South Wales and Victoria, Mr. W. Young (Ardmona) presiding.

Last season the price of canned fruits was reduced 6d. per dozen to distributors, the Secretary (Mr. F. J. Churches) stated. This concession, if passed on to the growers, would be equivalent to £2/10/- per ton. The canners also obtained a concession on sugar equal to 10/- per ton on fruit, yet refused to pay higher prices. The Government had promised a bounty to prevent loss on export, and canners could and should pay £12 a ton.

Growers in the Leeton district, said Mr. Black, were drying their Apricots rather than sell them to the factories at the price offered.

It was resolved, after discussion, to urge the Government to form the promised Export Board of Control, which would aid in stabilising prices.

In regard to Elberta Peaches, the serious position in New South Wales was discussed. Last year the Leeton Canning Factory processed 600 tons of Elbertas, but the management had decided not to handle this variety in future. This extra quantity would have to be put on the open market. Numerous delegates stated that they were considerably reducing their areas of Elberta trees.

The following officers were elected for the ensuing year:—President, Mr. P. H. Rutledge (N.S.W.); Vice-president, Mr. W. Young (V.); Secretary, Mr. F. J. Churches (V.).

**CANNED FRUIT EXPORT BOUNTIES.**

Particulars of the bounties to be paid on exported Peaches and Apricots were announced by the Prime Minister during May. The quantity of Apricots and Pears packed this year is greatly below last year's total, and the decline in London market prices had rendered assistance necessary. Mr. Bruce stated that the subsidy on Apricots would be limited to 9d. per dozen 30-oz. tins, as originally determined, because of the substantial reduction in the quantity available for export this year. On Clingstone Peaches, the limit of the

assistance would be raised from 3d. to 1/- per dozen 30-oz tins. The subsidy would be given to the canner, provided the following conditions were complied with:—

That not less than £10 per ton is paid by the canners at orchards, or at growers' sending station for all the Apricots, Clingstone Peaches and Pears purchased for canning during the 1925-26 season.

That the canned fruit is exported from the Commonwealth to the United Kingdom on or before the 28th day of February, 1927.

**COVENT GARDEN,  
LONDON****Ridley, Houlding  
& CO.,****Large Receivers of Australian  
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That all the fruit exported is graded, packed and labelled under the supervision of the Commonwealth officers, in accordance with the commerce regulations.

As a result of the very close supervision exercised by the Commonwealth officers, under the Chief Inspector (Mr. R. P. Allen), the export pack of canned fruits this year was probably of a higher grade and quality than anything previously packed in the Commonwealth.

The Kyabram Fruit Cannery has finished processing operations for this

season, and has a pack of very high grade. Sir Victor Wilson and Hon. W. C. Hill, Minister for Railways, visited the district recently, and spoke most highly of the canned fruit.

New settlers are arriving here, and these express their favourable impressions of the Goulburn Valley.

**MR. F. L. WILLIAMS.**

Accompanying this brief sketch is a picture of Mr. F. L. Williams, senior outside representative for the Australian Commonwealth Line of Steamers, whose trading operations are between the United Kingdom and Australia, via Suez and Colombo. The company makes provision for refrigerated cargo, and loading home-wards at Australian ports, taking fruit, wool, and refrigerated and general cargo at lowest current rates, and it is in this connection Mr. F. L. Williams plays an important part in securing freights in the above lines for his company.



Mr. F. L. Williams.

In the course of a brief interview, Mr. Williams mentioned he was a native of Liverpool, England, a large distributing centre for all produce, where he first obtained his experience in the shipping trade. Mr. Williams has been fully 16 years a resident in Australia. Upon his arrival, he joined up with the Orient Steamship Company, and left their employ in 1920. He also served his country at the Great War.

For a while Mr. Williams did brokering work, until four years ago he joined his present company and takes the credit of establishing the wool business now enjoyed by the company, which is a big factor. Being the senior outside representative, Mr. Williams makes periodical visits to Brisbane to keep in close touch with Sydney and Brisbane buyers. He is at all times of a genial and cheering disposition, and we wish him in his new appointment every success.





## INTERSTATE CITRUS CO-OPERATION.

### An Important Conference.

A CONFERENCE of the Citrus-growers of Victoria and South Australia was held at Mildura on June 10, when important decisions were arrived at with reference to co-ordination between the States in regard to marketing and other matters affecting the industry. Mr. S. Brentnall, President of the V.C.C.A., presided, and besides delegates from Myppolonga, Waikerie, Moorook, Berri, Renmark, Mildura and Merbein, there were also present Mr. Rupert Watson (Perricoota) and Captain Halhed (Merbein), Directors V.C.C.A.; Mr. W. E. Branson, V.C.C.A. market representative; Mr. B. S. B. Cook, Manager Fruit Marketing Organisation; Mr. S. A. Cock, Government Citriculturist, and Mr. J. A. Parkes, Secretary of the Murray Citrus Growers' Co-operative Association Ltd.

In his opening address, Mr. Brentnall expressed great satisfaction at the present condition of the organised industry. The assistance received

from South Australia in organising had been of great value. Speaking of marketing conditions in Melbourne, Mr. Branson stated that prices obtained this year so far were 3/- a case in advance of those received in the same period last year. This was due largely to the prohibition of the sale of immature fruit, and the better selling system. The V.C.C.A. handled 75 per cent. of the crop.

### Export Marketing.

Delegates referred with some alarm to the disinclination of growers to export, expressing the opinion that it was better to send a proportion of their fruit overseas, even if they got only out-of-pocket expenses, rather than risk glutting the home market. Conference approved the decision of the Brisbane Ministers' Conference in favor of a compulsory levy, the funds to be administered by the respective State Central Citrus Associations and used to organise the home and export markets and the industry generally.

Referring to the New Zealand market, Conference approved the principle of close co-operation between the States exporting to New Zealand, and the regulation of supplies.

### Immature Fruit.

Mr. Cock explained the work being done by his Department in the adoption of standards for ripeness, and the action of the Department was heartily endorsed by the Conference.

It was further agreed that the Governments concerned be urged to compile a tree census showing acreages, varieties, bearing and non-bearing trees, and that district committees should be formed to arrive at reliable estimates of production.

Recognising the value of Interstate co-ordination, and also of meeting in Citrus-growing centres, it was decided that annual conventions of Citrus growers from all States should be held, the first to take place at

Mildura in May, 1927.

The day following the Conference was devoted to consideration of the problems of Citrus culture in the groves of Merbein, Irymple and Curlwaa, and much valuable information was exchanged.

## CITRUS FRUITS.

### Export Guarantee.

It was recently announced by the Prime Minister that the Government had decided to give a guarantee to growers of Citrus fruit exported during 1926, in connection with out-of-pocket expenses incurred in placing their fruit on the oversea market.

Mr. Bruce stated that the guarantee would be based on the average price realised by each grower on the whole of his fruit in each individual shipment, and that the maximum amount payable would be 6/- per case of 1 1-3rd bushels. The guarantee would apply in those instances where the fruit arrived in a deteriorated condition, due to no fault of the exporter, and would be confined to fruit exported to the United Kingdom, and the Department of Markets and

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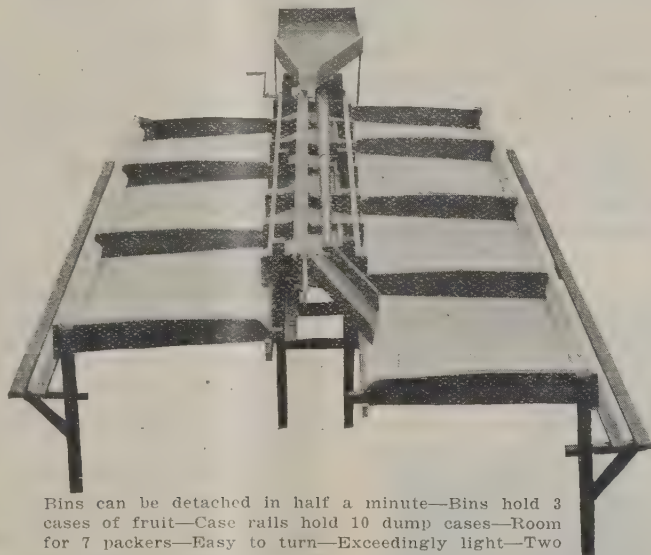
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We do not hesitate to say that the Grader illustrated will be a **Revelation** to you. You will be astounded at the **Quality** of the machine in comparison to the **low price**. Write for leaflet with fuller particulars.

**CAPACITY, 800 CASES PER PAY.**

All Orders for this Model received before July 31st will be subject to 5% discount for cash.

Cash Price, without Packing Bins, £20.

Cash Price of Packing Bins, £8 extra.

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Migration must be satisfied as to the correctness of the claims.

The total amount payable under the guarantee for the year 1926 was limited to £2500.

At the Conference of Ministers of Agriculture held in Brisbane, the Fruit Committee recommended the continuance of the Citrus insurance fund, it being decided that exporters should be secured against actual loss other than the value of the fruit, if the fruit realised less than 12/6 per case of 1-1/3 bushels, the Commonwealth to make good any deficiency not exceeding the amount named, or the equivalent on the bushel case.

### N.S.W. CITRUS CROP ESTIMATE.

In the estimates of the N.S.W. Citrus crop published in last issue, there was a considerable discrepancy between the figures given by Mr. W. J. Allen, of the Department of Agriculture, and Mr. H. G. Such, manager of the Central Citrus Association Co-op. Co. In regard to the

latter, we learn that the estimate was taken from figures supplied by the Department of Agriculture recently in respect to the 1924 crop. It was then stated that there were 23,000 acres of Citrus, with a further 9,000 acres to come into bearing, and that the probable crop for 1924 was about 2 1/2 million bushels. As the crop in 1925 was undoubtedly greater than 1924, the estimation that the crop was at least 2 1/2 millions appears to have been justified, particularly in view of the fact that a certain proportion of the 9,000 acres of young trees might be expected to produce something.

If the acreage under Citrus as stated by the Department is correct, the assumption that one bushel per tree would be the average, does not appear unreasonable. Mr. Allen states that his estimate was on the conservative side. An independent estimate by Mr. P. S. MacDermott, manager of the Gosford District Citrus Packing House Ltd., indicates that there are at least 400,000 cases in the Northumberland Area alone.

### FUMIGATING CITRUS.

Citrus fumigation plants have been doing satisfactory work in the Mildura, Goulburn Valley and Kerang districts, and a beginning has been made at Doncaster. Last year 18,000 Citrus trees were fumigated for red scale; this season the number is 30,000, according to the "Sunraysia Daily." The demand for fumigation has been so great that the Department has been unable to comply with the requirements, but further additions are being made to the plant.

### CITRUS IN QUEENSLAND.

The Secretary of the Citrus Section of the Queensland Committee of Direction (Mr. F. G. de V. Gipps) writes under date June 21, that the general crop of citrus in Queensland is light. Rockhampton suffered from the ravages of the green Orange bug. The estimated crop is: Oranges, 60,000 bushels; Mandarins, 40,000 bushels; Lemons, about 2,000 bushels.



**BIG CITRUS FIGURES.**

44,000,000 Bushels in California and Florida.

S. Africa will Ship 8,000,000 Bushels to European Markets in Ten Years' Time.

High Quality and Pack are the Objectives.

ONE of the most outstanding points of note in regard to the fruit industry of South Africa is the phenomenal growth of the citrus industry, writes Mr. H. Clark Powell, Professor of Horticulture at the Transvaal University College, in the S. African "Farmer's Gazette."

Although citrus fruits have been grown in the Union for many years the production of commercial crops for export is of very recent development, as can be seen from the following figures:—Export, 1919, 45,000 cases; 1921, 217,000 cases; 1924, 530,000 cases; 1925, about 1,000,000 cases. Those quantities in themselves are not of great importance, but when one considers that 5,000,000 cases should be available for export in 1930, it is readily seen that the citrus industry is soon to be the dominant factor in the fruit export of the country. Ten years from now I am sure that 8,000,000 cases of Oranges will be exported from S. Africa to British and

**European markets.**

The production of Oranges and Lemons in California last year amounted to 24,000,000 cases; Florida produced 20,000,000 cases of Oranges and Grapefruit; Italy and Sicily sent 5,000,000 cases of Lemons to the States.

About 40 per cent. of the acreage of citrus fruits in the States is not yet in bearing. To market the present California output all of the resources of the powerful growers' organisation are worked almost to capacity. The point I wish to bring out is this—what marketing policy will be followed by the California Fruit Growers' Exchange in the next few years? Of course, further efforts to increase consumption within the States will be necessary, but as it is the Americans are consuming three times the fruit per capita that is used in Great Britain. The problem then becomes one of market expansion, and the most logical direction in which to extend will be the British and European markets.

**Enormous Increase Certain.**

Hence South Africa is confronted not only with the certainty of an enormous increase in output, but also with the great probability of severe competition in her logical markets.

There are various ways in which such competition can be met, but only one will be discussed at the present time—that of placing on the markets fruit that is in every way equal to that shipped from California. Much of the fruit that is going over from this country at the present time is not as good as it should be, and the following quotation illustrates this view very clearly. The statement and figures are from a personal letter from one of the largest fruit dealers in the United Kingdom. "So far this season (1924) California Valencias from the . . have ranged from 16/6 to 28/-, "Sunkist" from 24/- to 30/-, South African Navels from 16/- to 25/-, Seedlings from 13/9 to 22/6. Your description of the difference in the growers' handling of their Oranges (as compared with California), accounts for the difference in grading also, all of which accounts, of course, a good deal for price differences."

Obviously, if South Africa, with her rapidly increasing output is to meet the increasing competition of California, she must put on the market a first-class article. I have found here that opinions differ as to what constitutes a first-class article or pack. One of the best ways in which this point can be brought before producers is through the medium of shows. Competitive display of citrus products can be of great help in bringing about increased quality of both fruit and pack.



Citrus trees fumigated on Mr. David Grant's property at Wamoon, Leeton, N.S.W., by Messrs. Colman and Oldershaw. Height, 25ft.; circumference, 78ft.; age, 11 years; estimated crop, 15 cases. Variety, Joppa.

## The New South Wales Fruit and Vegetable Agents' and Merchants' Association

The above Association, representing practically the whole of the wholesale selling interests of the Fruit and Vegetable Trade of Sydney, exists to protect the interests of both Growers and Agents, and will welcome communications on all matters affecting the trade which may arise for investigation, adjustment, discussion or determination.

Address all communications to

**HENRY W. F. ROGERS**

Secretary,

Fruit Exchange,

**SYDNEY**

## BUTTERFLIES AND CITRUS TREES.

Leslie H. Mosse-Robinson, "Exon Vale," Narara, N.S.W., writes:—I have read with interest an item headed, "Fighting Insect Pests in the Orchard—Caper Butterfly," appearing in the April number of your paper.

I must confess myself mystified as to the butterfly to which your correspondent refers. There are two butterflies whose larvae feed on citrus trees, in addition to native plants, viz.:—*Papilio Aegens* and *Papilio Anactus*. The range of *P. Aegens* extends from Cape York to Wandin in Victoria, and that of *P. Anactus* from Kuranda, in Queensland, to Mildura.

Both species are common in this district, where they feed on the young leaves and shoots, particularly of young trees. They are never sufficiently common to be considered a serious pest, nor warrant such drastic remedial measures as a spray with arsenate of lead. I have about 350 young trees, 1½ to 2 years old, in my orchard, and, though *P. Anactus* has been particularly abundant this autumn, I have been able to keep it in complete check by going round when I happened to have half an hour to spare, and pinching off the eggs, which are laid conspicuously on the tips of the young shoots. The result has been that though I have destroyed several hundred eggs, I have not been able to see a larva anywhere.

A third species—*Papilio Sthenelus*—does at times feed on citrus trees, but it "inhabits the drier interior rather than the coastal districts; it is a rarity in southern Australia, were wandering single examples are occasionally seen." (See page 161, "The Butterflies of Australia," Waterhouse and Lyell).

There is a butterfly known as the "Caper White" on account of its larvae feeding on our native *Capparis*, which is sometimes spoken of as the Native Lime. This butterfly, which is a white one with black markings, is *Anaphalis Sentonia*. Its larvae eat the leaves of the native capers, but certainly do not attack Orange trees.

I have been in correspondence with Dr. G. A. Waterhouse, D.Sc., B.E., F.E.S., the recognised authority on the butterflies of Australia, and the following is an extract from a letter from him, dated 13th April, 1926:—"I can state that there is no butterfly whose larvae feed inside Oranges; all the larger species are external feeders, and attack the foliage and young shoots only. I regard the paragraph as pure imagination, but

it would be interesting to find on what facts the writer bases his statements."

Though there is undoubtedly no butterfly whose larvae feed on Oranges, I have bred a small species of *Tortrix* Moth, both from Oranges and Lemons, on my orchard. This does most certainly do a certain amount of damage; it attacks the Oranges when they first ripen, and I found that last autumn, when there was a heavy fall of fruit somewhere about the end of May, practically all the Oranges that fell in my orchard had been punctured by the larva of this species. Up to the present, however, the damage it has caused cannot be said to be sufficient to necessitate such an expensive operation as a general spray.

As there appears to be little doubt that orchardists throughout the Commonwealth are being unintentionally misled in this matter, I should esteem it a favour if you would kindly insert this letter in the next issue of your widely-read paper. A copy of the letter is this day being forwarded to the Gosford District Citrus Packing House Ltd., of which I am a member.

Answer.—

Mr. C. French, Government Entomologist, comments as follows:—In Victoria we have *Papilio sthenelus*

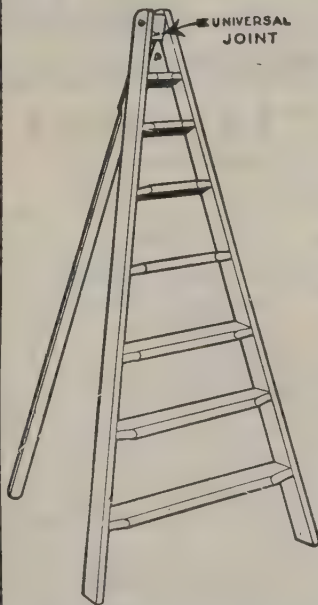
and *Papilio anactus* attacking citrus trees; the former is comparatively rare. Last year a few were found in the Orange orchards in the Goulburn Valley. The latter, *P. anactus*, has become fairly common. It has been found at Mildura, Goulburn Valley, Doncaster, Melbourne and other districts.

Neither of these butterflies do very much damage, as they are easily controlled by spraying with arsenate of lead.

The Caper Butterfly has been recorded as attacking citrus trees, especially the leaves, and the larvae boring small holes into the skin of the fruit. Like the other species above-mentioned, it causes very little damage to the citrus trees. The Light-brown Apple Moth, *Tortrix ashwarthana*, is a more serious pest of citrus fruits, and is spreading rapidly in citrus and other orchards in Victoria.

Your correspondent states that he can keep these pests in check by hunting for the eggs and destroying them. This would be impossible on some of our tall citrus trees. When the orchardists notice the caterpillars they simply spray and stamp out the pests. Most orchardists are not entomologists.

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# New South Wales.

District News and Notes

Successful Organization

## N.S.W. FRUIT EXPORTS.

Mr. W. J. Allen, Fruit Expert and Irrigationist, Department of Agriculture, Sydney, writing on June 4, gives the following particulars of fruit exported from New South Wales:—

| Destina-<br>tion. | Apples &<br>Pears,<br>cases. | Other<br>Fruit,<br>cases. | Total<br>cases. |
|-------------------|------------------------------|---------------------------|-----------------|
| N.Z. . . . .      | —                            | 4,761                     | 4,761           |
| U.K. . . . .      | 12,821                       | 313                       | 13,134          |
| Islands . . .     | 4,690                        | 3,416                     | 8,106           |
| Canada . . .      | 104                          | 1,624                     | 1,728           |
| East. . . . .     | 1,125                        | 1,553                     | 2,678           |
| Europe . . .      | 178                          | —                         | 178             |
| <b>Totals</b>     | <b>18,918</b>                | <b>11,667</b>             | <b>30,585</b>   |

## COOMEALLA IRRIGATION AREA.

The N.S.W. Water Conservation and Irrigation Commission notifies

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that many inquiries are now being received regarding land on the Coomealla Irrigation Area. A number of farms are available on that Area suitable for horticultural purposes, either on freehold or leasehold tenure, ranging in area from 14 acres to 31 acres.

All applicants for farms are required to have £300 capital in cash, which is to be expended on improvements on the holding, or an equivalent in stock or plant suitable for farm development. Residence on the holding is necessary until improvements to the value of £600 are effect-

ed. The Government Savings Bank is prepared to make advances to settlers on the Coomealla Irrigation Area.

Full particulars can be obtained on application to Mr. H. Wagstaffe, Acting Engineer and Manager, Curlwaa Irrigation Area, Wentworth, or from the Secretary, Water Conservation and Irrigation Commission, Union House, 247 George Street, Sydney.

## LEETON CITRUS CO-OP. LTD.

At a meeting of Citrus growers held at Leeton on May 20, it was decided to form a rural society, with the object of linking up with the Central Citrus Association. The following were appointed provisional directors:—Messrs. H. Gaynor, W. T. Craig, R. D. Lang, W. D. Bremner, G. Arbuckle, A. D. Mackellar and G. Robertson. Mr. Williams, of the Producers' Distributing Society (C.F.S.), Leeton Branch, was acting Secretary. Arrangements were made to start co-operative packing early in June. It was anticipated the company would start off with members representing at least 10,000 cases for the season. Members would pool their fruit in a monthly pool, and growers be paid by weight, advances, if necessary being paid before the winding up of the pools. Marketing is to be done through the N.S.W. Central Citrus Association.

## "FOLLOW GRIFFITH."

In a report to the N.S.W. Central Citrus Association covering his observations during a recent visit to the principal cities of New Zealand, Mr. W. Cowlishaw, a Citrus grower from Central Mangrove near Gosford, says, *inter alia*:—

"One of the outstanding features of my visit was to find the very high reputation gained over there by the Griffith Producers' Co-operative Co. Ltd. Wherever I asked for suggestions for the improvement of packing house fruit, they invariably said 'Follow Griffith, you cannot improve on them.'"

The "Murrumbidgee Irrigator," of May 25, in quoting the above, states that the company has many improvements in mind, some of which will be introduced this season.

## VALUATIONS ON M.I.A. AREAS.

Hearings are in progress before the Land and Valuation Court at Griffith, N.S.W., to consider the matter of land valuation on the Murrumbidgee Irrigation Areas. Large meetings of settlers, including ex-soldier settlers have been held, and committees formed for preparing evidence.

## CURLWAA IRRIGATION AREA.

During the three months ended March 31, 1926, the weather conditions were almost throughout excellent for the drying of vine and deciduous fruits, the total rainfall for the period being 60 points—three points in January, one in February, and 56 in March. The dried fruit market is showing a considerable improvement this year, it now being anticipated that £85 per ton will be realised for hot dipped fruit, this increase being accompanied by a reduction in selling expenses of approximately £9 per ton.

The Citrus setting this year is poor, due no doubt to heavy frosts experienced during the setting period.

The absence of insect pests is very noticeable, all the trees inspected being found to be clean and healthy, with very few exceptions.

The fourth irrigation of the season was commenced on the 4th, and completed on the 31st January, 1923

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acres having been watered. The fifth irrigation was commenced on the 4th and completed on the 28th February, the area watered being 1427 acres. The sixth and last irrigation of the season was to have commenced about March 20, but was postponed owing to the saltiness of the water at that time, due to the low state of the river. This has since improved.

Progress has been made with the metalling of the road from the Abbotsford Bridge to Wentworth, but completion must await the opening of the bridge now being constructed across the river.

Work has also been commenced on the road to the Tuckers' Creek Bridge, which has recently been completed by the Public Works Department.



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### LIGHT CITRUS CROPS AT GLENORIE.

Mr. F. A. Nicolson, Glenorie, N.S.W., writes under date, June 8.

The **Citrus crop** in this district is light to medium; young trees in all varieties are good, but older trees light. I consider the crop will be only 70 to 75 per cent. of last year's total.

After the drought broke about March 20, the trees made a wonderful recovery. As usual, all the older trees that were badly affected by the dry conditions, bloomed profusely. The future of this setting is very doubtful, as the continued wet weather has left its mark, causing the young fruit just setting to turn yellow and fall. The off season bloom is not appreciated by growers, as the following main crop bloom is adversely affected.

During the past three months the little second crop fruit available has realised fancy prices. **Peas, Beans, and other vegetable crops** will be a failure as in most areas the ground has been too wet for cultivation, and the weeds have overgrown the crop in many instances.

The biggest loss in this district will be the failure of the usual winter crop of **Passion Fruit**. The damp wet weather caused most of the blossoms to drop, and many that survived have only set very poor quality fruit.

Apparently only small plantings will take place this season of **Citrus** fruits.

### THE LATE FREDERICK CHILTON.

The late Frederick Chilton, of Turramurra, Sydney, who passed away on June 2, at the age of 88 years, was a native of Berkshire, England, and after frequent journeys between England, U.S.A., South America and Australia, finally settled down in 1879, in the district which was then known under the general name of Lane Cove, on a seven-acre block of wild bush country, to build an orchard on which he lived continuously till his death. After a few years he acquired another similar area of orchard property close by, and worked both until his retirement from active work a few years ago. He was of a very quiet retiring disposition, preferring to make use of his leisure time by reading. A man of strict honor and integrity, and whose word was his bond, he was highly respected by all who knew him. The deceased gentleman leaves a widow and one son, M. F. Chilton, who carries on a very extensive fruit distributing business at the City Fruit Markets, Sydney, to whom we extend our deep sympathy.

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Telephone: Southampton 2610.  
Telegrams: "Geracost," Southampton.  
Eclipse Yard, Westgate, Mansfield.  
Telephone: Mansfield 440.  
Telegrams: "Geracost, Mansfield."

### THE LATE MR. HUGH V. MCKAY.

Australian industry has suffered a loss in the death of Mr. Hugh V. McKay, which occurred in May last at the age of 61 years. Mr. McKay was a native of Bendigo, and his work in the improvement of agricultural machinery is known throughout the world. In 1884 he made the first machine which combined the action of stripper and winnow, the forerunner of the many "Sunshine" machines. In 1916 Mr. McKay became a member of the Board of Business Administration associated with the Defence Department, a work for which he refused remuneration, and has performed many other public services. For the last few months of his life, Mr. McKay was in poor health.

### WESTERN AUSTRALIA.

#### Organising the Fruit Industry.

At the last Annual Conference of Western Australian Fruitgrowers, it was unanimously agreed that a State Fruit Council should be formed, and a suggested Constitution was adopted. Copies of this Constitution have now been sent to all fruitgrowing organisations in the State, with a request that the proposal be carefully considered and suggestions offered. Providing sufficient support is received, it is intended to call a meeting and approach the Minister for Agriculture for the necessary legislation.

The proposed Constitution provides for a Central Board constituted of 13 sectional representatives, as follows:—Apples and Pears, 4; Citrus, 3; Stone Fruit, 3; Grapes and Dried Fruit, 3; the members of the Board to be elected by the growers.

The finances shall be provided by a levy on every case of fruit marketed or exported, not to exceed 1d. per case, the local Associations being financed by the Board out of the funds raised.

#### FRUIT EXPORTS FROM W.A.

Mr. Geo. W. Wickens, Officer in Charge Fruit Industry, Department of Agriculture, Western Australia, reports that the export of fruit from Western Australia to overseas markets from January 1 to May 14, 1926, totalled 326,751½ cases.

Of this number Java, Singapore, etc., took 25,607½ cases and Great Britain, Europe, Colombo, Port Said, Bombay, etc., 301,144.

The export is made up as follows:—

|                         |               |
|-------------------------|---------------|
| Apples . . . . .        | 273,258 cases |
| Grapes . . . . .        | 31,699 "      |
| Pears . . . . .         | 20,999 "      |
| Plums . . . . .         | 256½ "        |
| Nectarines . . . . .    | 67½ "         |
| Peaches . . . . .       | 245 "         |
| Passion Fruit . . . . . | 23 "          |
| Quinces . . . . .       | 50½ "         |
| Apricots . . . . .      | 1½ "          |
| Tomatoes . . . . .      | 21 "          |
| Lemons . . . . .        | 69½ "         |
| Oranges . . . . .       | 61½ "         |

Total . . . . . 326,751½ cases

**Notes Held Over.**—Owing to lack of space, contributions from the following have been unavoidably held over:—Mr. F. Stockton, Hastings; Mr. W. J. Williamson, Portland; Mr. J. Tully, Doncaster; Mr. D. G. Wills, Sydney; Mr. W. Sam Johnson, re Queensland Fruit Marketing, Mr. R. E. Haysey.



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**BORDEAUX SPRAY MIXTURE**

(Guaranteed to Contain from 50 to 56 per cent. Copper Sulphate)

An Absolute Preventive for Downy Mildew of the Vine, Curly Leaf and Brown Rot of the Peach, Shot Hole of the Apricot, and Cure for Black Spot of the Vine, Apple and Pear, Blue Mould on Oranges, Sleepy Sickness of Tomato (Tomato Wilt), Mildew on Roses, Black Spot on Carnations (if sprayed as spots crack), and other Fungus Diseases.

Schloesing's Mixture has achieved remarkable success in N.Z. and Tasmania, where large quantities of it are used.

Many testimonials have been given as to its efficacy, and above all, it is the ease with which it is used which recommends it to growers.

Dear Sirs.— Cygnet, Tas., 10th April, 1926.

I have used your Spray Powder for Black Spot, and can highly recommend it as it has given me every satisfaction.

I have given your traveller an order for 2 c/s for next season.

Yours truly, (Sgd.) I. D. WYLIE.

Cradoe, Tas., 27th March, 1926.

Dear Sirs.— Please order for me 2 c/s of the Schloesing's Bordo for Black Spot.

I used it last season, and found it to be quite as efficacious as the old Bordeaux Mixture, and much more easily mixed.

Yours truly, (Sgd.) JOHN BRYCE.

Schloesing's Mixture has been in use in Europe for about 30 years, and has the advantage of doing away with the large amount of labour necessary in preparing the ordinary Bordeaux Mixture. It does away with the necessity for—

1. A stock mixture of Bluestone.
2. A supply of lime milk.
3. Mixing the two in proper proportions.
4. Testing with paper for acidity, etc., as it is slightly alkaline.
5. Straining, as there is no grit in the material.

Do not add anything for "Sticking" purposes, THE MIXTURE WILL "STICK" ITSELF.

Sole Agent for Victoria:

**LAWFORDS FRUIT EXCHANGE**

Pty. Ltd.

::

**DONCASTER**

Vic.

**SEASONABLE OPERATIONS.****Winter Work at Renmark.**

Mr. Oscar Weste, Renmark, S.A., writes:—

1. Very little spraying is done in winter, excepting during a wet year; then the Sultana growers swab or spray with a 10 per cent. solution of sulphuric acid to kill the spores of black spot. Winter spraying for black spot (which disease we have been particularly free from during the last year) is the only effective way of killing the spores. Spring and summer treatments are merely checks to the disease. If the disease breaks out during spring and early summer, a very effective check is affected by directing the spray nozzle on to the bunches, thereby saving the crop. Bordeaux powder ready mixed has proved almost "fool proof" in obtaining the desired emulsion.

2. The principal fruits of the district are vine products: Sultanas, Currants, Loxias, Doradillas and Shiraz.

3. July and August find growers pruning vines. In training young Currants it is not necessary to have more than two wires to the trellis, and the most satisfactory results have been obtained by taking the young vines direct to the top wire, then when the arms meet, depress them to the bottom wire,

By depressing the arms the sap flow is checked, an even distribution of spurs ensues, and a maximum amount of light is allowed each arm.

In pruning Sultanas on a three-wire trellis, the aim of the pruner should be to bring the permanent crown or short arm up to the second wire, so that when twisting the canes, at least two are depressed. Very definite results have been obtained by means of depressing the canes. It sometimes happens that a pruner brings his canes from the crown to the top wire, with the result that the buds do not burst until the cane is twisted onto the top wire, leaving a bare cane for half its length.

**WINTER WORK AT NURIOOTPA, S.A.**

Pruning is the principal operation during July. Several pruning demonstrations have been given by local experts, affording much useful information to growers.

In actual practice, when the trees come into bearing, the principles, upon which the correct system of pruning is based, have to be considerably modified according to variety, soil, etc., and we have to be guided by observation and experience. For instance, various kinds of Peaches re-

quire entirely different treatment as regards the laterals or fruit shoots.

With Apples, I find that such kinds as Cleopatra or Rome Beauty give best results with light or moderate pruning, according to soil, whilst Dunn's, Jonathans, etc., respond well to much more drastic treatment.—A. B. Robin, Nuriootpa, S.A.

**FRUIT AT DONCASTER (VIC.).**

Mr. A. F. Thiele, Doncaster, writes (8/6/26):—

Pruning should be well in hand now so that when suitable weather comes later on the whole energy should be devoted to the spraying. I believe in leaving the oil spraying as late as possible, and nice warm days should be chosen.

Two light sprayings of Red Oil at short intervals are better than one heavy spraying. We use three gallons of oil to eighty of water; some use it much stronger. Pruning and spraying will be the main work in the orchards here for the next two or three months.

The principal fruits grown in this district now are Pears, Peaches and Lemons (Lisbons). Pears include W.B.C., B. Bosc, Winter Cole, Josephine de Malines, Winter Nelis, Pack-



ham's Triumph. Peaches are Brigg's Red May, York, Sneed, Levonqua, Wiggins, Zerbe's Early, Late Crawford, and many other local seedlings of good quality.

The gardens have all been ploughed and the soil is in good order through not having got too wet. So far the prospects for the ploughing season are good, but that does not always prove a heavy crop.

#### KURRAJONG.

Mr. Wm. S. Arnold, Kurrajong, N.S.W., writes.—

(1) **Winter and Spring Spraying.**—This is nil as far as Kurrajong Soldier Settlement is concerned, some 30,000 Citrus having been fumigated for red scale up to June, 1926.

(2) The principal fruits grown here are Citrus (L. Valencias, Emperors, Lemons, Navels, Silletas and Joppas.

(3) We recognise July and August as months to cover over with plough

all vegetative growths, either self-grown or planted green crops.

Common Oranges and non-commercial varieties will be pruned back hard to make a new head for reworking in January, February or March, 1927.

(4) The local packing shed has been closed down.

#### WESTERN AUSTRALIA.

Winter Operations at Donnybrook, W.A.

Mr. Gus Sharp, Donnybrook, Western Australia, writes:—

(1) The general winter spray used here is Lime-Sulphur, one in nine. Owing, however, to the gradual increase of red mite, many orchardists are spraying with Red Oil now, to be followed by Lime-Sulphur in August. There should be a spring spraying of Bordeaux for Fusicladium.

(2) The principal fruits grown here are Apples and Pears, all commercial

varieties, with a sprinkling of citrus and soft fruits.

(3) The chief work here in July and August is pruning and draining wet patches. My experience here shows that best results can be got from fertilizers (phosphoric acid the most necessary) by sowing half, as soon as crops are off, ensuring a good growth of cover crop while the ground is warm.

#### "ARBOLEUM" MISCELLIBLE OIL SPRAY.

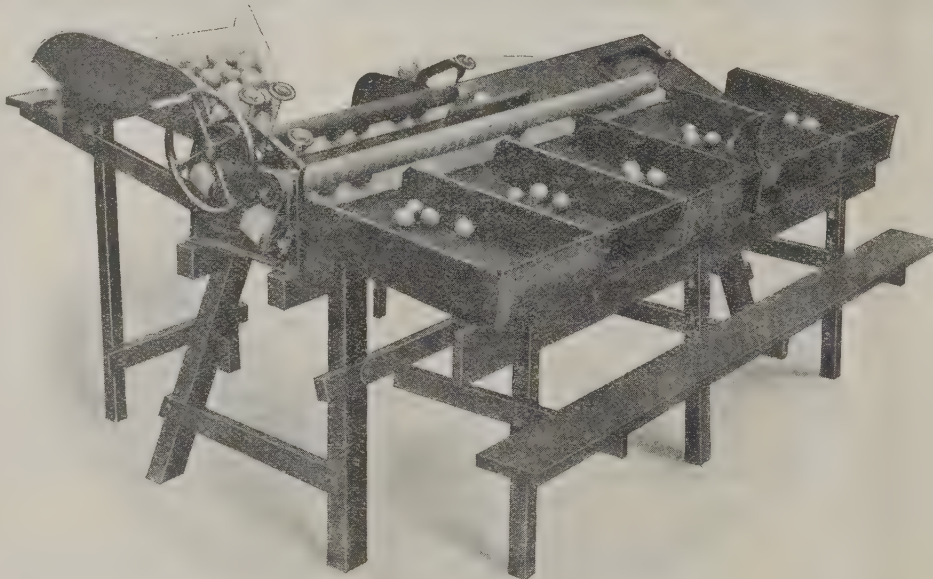
Produced by the proprietors of Cooper's Sheep Dip.

Manufactured with a generous supply of emulsifiers, thereby overcoming the usual tendency to separate out. Mixes readily and quickly with water. Dilution for Citrus trees: 1 gallon to 50 gallons water. Prices: 40 gallon casks, 2/9 per gall.; 5 gallon drums, 4/9 per gall.

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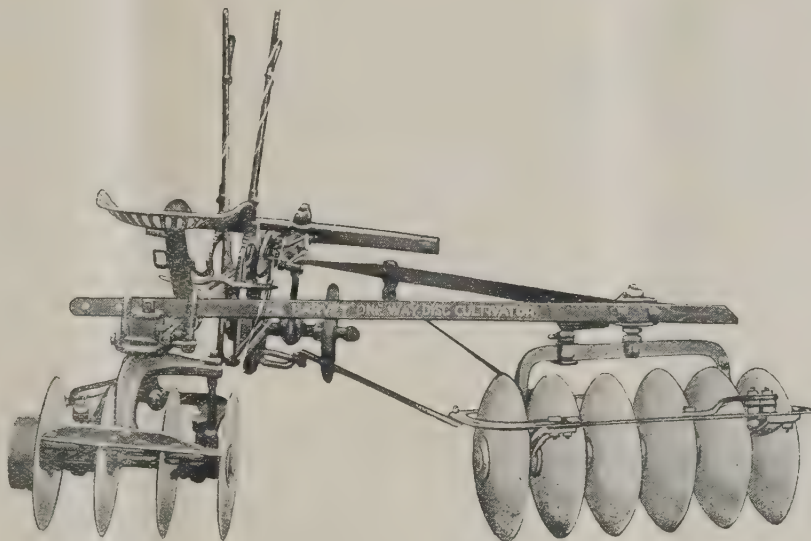
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*Five Implements in one—A Two-way Disc, One Way Disc, Spring-tooth Cultivator, and Cutting Rake, and can be used for Irrigation Furrowing*



One Way Disc Extended (Cutting out)

The "Harvey" One-Way Disc is out on its own for Orchard Cultivation. It cuts deeper, and will enter and thoroughly work harder ground than any other disc made. This fact is borne out by several growers using this machine instead of the Plow. Another great feature is that it will work right up to a large spreading tree, where no other implement can reach, yet the team and driver are clear of the branches. It will throw the soil to the trees or pull it away as you desire, leaving the land free from ridges and gutters, as in the case with other discs. The trees can be worked thoroughly while carrying a full crop of fruit. This machine is also used extensively for running out water furrows, by tilting the gang so that one disc only strikes the ground with a good undercut, and takes out a splendid irrigation furrow.

This Disc will break up hard land where a Plow has refused to work.

Can be regulated to cut any depth or shallow against the tree, and deeper in other parts if required.

We stand behind our implements, and guarantee them to be the best quality.

### **To Convert into Spring Tooth Cultivator**

The "Harvey" One-Way Disc may be converted into a Spring-Tooth Cultivator by removing the gang of discs and substituting a Spring-Tooth Cultivating Attachment made for the purpose, which will cut 5 ft. wide, and get right to the butts of the trees. By a simple conversion this Spring-Tooth Cultivator may be converted into a Cutting Rake to rake up cuttings after pruning. This is done by slipping the two rows of Tynes into one, and is then a perfect Cutting Rake, which is tilted from the seat like a Hay Rake, gathering the cuttings and tipping them into heaps. This attachment is fitted with a patent device which automatically cleans all rubbish out from the Tynes each time the Cultivator is tilted.

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# The Fruit Trade

## Market Reports and News Items.

### ENGLISH MARKET REPORT.

London.—T. J. Poupart Ltd., Covent Garden, reported on April 30, that a few English Apples were still being sold. Shipments from Australasia were heavy, but prices low. At Hull large quantities of Australian Pears were arriving, but owing to poor quality realised low prices. The fruit and vegetable market generally was erratic. On May 13, despite transport difficulties, a fair quantity of produce was being handled.

J. O. Sims, Boro' Market, London, reported on May 4, the sale of 800-900 cases N.Z. Apples, ex "Tainui," prices for fancy ruling from 9/6 to 14/-; good, 9/6 to 12/-. On May 11, owing to the help of volunteer labor, good quantities of fruit were sold. Tasmanian Apples, ex "Osterley," realised 9/6 to 13/-; W.A. Apples, ex "Esperance Bay," 11/- to 15/-. On May 25, 3,600 Tasmanian Apples, ex "Ormonde" and "Ballarat," were sold at 9/6 to 14/-; odd lot of wasty, 7/3.

Liverpool.—Jas. Adam, Son and Co. reported shipments of W.A., Tasmanian and Victorian Apples, selling fairly well, but there was a lot of bitter pit, spot and waste, particularly in Tasmanian. W.A. and Tasmanian Pears sold from 5/9 to 7/3 half case; 4/- to 8/9 tray. W.A. Grapes, 11/6 to 14/- per 10 lb. box; 25/- for 33 lb. case.

J. C. Houghton and Co. reported good demand for Tasmanian Apples, ex "Port Dunedin," quality and con-

dition being excellent, prices from 8/- to 15/-. Pears land in good condition, prices 8/3 to 12/3 per half case.

### Germany.

Hamburg.—Ph. Astheimer and Son reported on April 29 good demand for W.A. and Victorian Apples and W.A. Pears. On May 19 a large cargo of Apples and pears, ex "Horatius," was discharged at Hamburg owing to the general strike in Great Britain, and fair prices were realised. Quality and condition of Cleos., Dunns, Jonathans, Rymers, Reinette, King Davids, were in most instances satisfactory, though some showed decay. Cox's were very poor. Pears were in good condition; Bosc is well liked on the market.

The s.s. "Abbekerk" arrived at Hamburg at the end of May, with 27,000 cases of Victorian Apples in very good condition.

### FRUIT SALES.

London, 11/6/26.—Prices for Sturmers and Cleopatras are fairly well maintained. Many Australian and N.Z. Jons. are arriving in soft condition. Sales, ex "Ceramic," "Moreton Bay," "Narkunda," and "Balranald," of Tas. Sturmers, were made at 9/- to 11/6 a case; Cleos. at 7/3 to 11/-; Jons. at 7/- to 13/-; others at 6/- to 9/-. Sales, ex "Fordsdale," "Balranald," "Moldavia," and "Oronsay" were made as follow:—W.A. Sturmers, 9/- to 13/- a case; Cleos., 10/- to 15/-; Cox's, 10/- to 14/-; Vic. Sturmers, 10/6 to 11/6; Cleos., 10/-

to 14/6; Dunn's, 9/6 to 15/-. Ten thousand cases of Tas. Apples, ex Port Darwin, and 6,000 cases from New Zealand, ex "Port Victor," were sold at auction at Southampton. Tas. bringing mostly 7/6 to 10/6; a few Cox's, 13/- to 14/-; and N.Z. mostly 8/- to 10/9; Jons. making 10/6 to 11/6; Cleos., 12/-; and Cox's, 13/3 to 16/-.

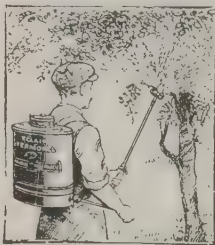
London, 23/6/26.—Heavy supplies of Strawberries, which are selling cheaply, are affecting the Apple trade. Apples, ex "Mooltan," were sold as follow:—Tas. Sturmers, 7/6 to 10/- a case; Cleos., 7/- to 9/9; others, 5/- to 8/6; Vic. Jons., 4/- to 9/6; others, 8/6 to 10/-; S.A. Cleos., 8/- to 10/6; Dunn's, 8/6 to 9/-. N.Z. Sturmers, ex Corinthic, brought 8/6 to 11/-. Apples, ex "Ferndale" and "Port Adelaide," were sold at Hull, W.A. Dunn's bringing 11/9 to 12/-; others, 8/3 to 10/6; S.A. Cleos., 10/6 to 13/-; others, 8/3 to 10/3; Tas. Cleos., 8/- to 10/-; others, 6/6 to 8/6.

Liverpool, 8/6/26. — "Sophocles" W.A. and Vic. fruit sold at 9/- to 12/6. The "Nestor's" W.A. Winter Nelis Pears brought 21/- per case. Of "Sophocles" shipment of W.A. Grapes, in three-quarter cases, Ohanez brought 15/- to 15/6, and Malagas, 18/-.

Brown Heart in Tasmanian Apples.

London, 25/6/26.—The Apple market is dull. The "Port Darwin's" Tasmanians realised 6/- to 10/-. The "Port Adelaide's" W.A. Apples at Hamburg realised:—Cleos., 6/- to 21/-; Dunns, 10/- to 21/-; others, 6/- to 15/-. The Pears were worthless.

The "Port Adelaide's" Tasmanian Apples at Liverpool showed a considerable portion of the contents of holds Nos. 2 and 4 seriously affected with brown heart. There were no signs of brown heart in the Apples



The "Eclair" Spraying Fruit Trees.

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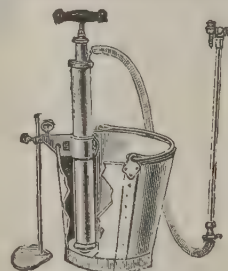
LIQUID CAPACITIES 1½ pints to 88 gallons.

PRICES FROM 4/- each.

The above types include machines for Spraying Trees, Bushes, Ground Crops, and for applying Limewash, Whitewash, Distemper, Waterpaint and Disinfectants

Ask your local Merchant for full particulars, or write for catalogue and leaflets to:—

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landed from this boat at Southampton, Hull or Hamburg. The matter has been referred to the Scientific Research Departments at Covent Garden and Cambridge.

#### Dried Fruits.

Advices of the following sales of new season's fruits were received by the Dried Fruits Export Control Board on 17/6/26:—

Sultanas.—46,314 boxes (1,518 tons); average price, £72/15/- per ton.

Currants.—17,302 boxes (432 tons); average price, £47/17/- per ton.

### AUSTRALASIAN MARKETS.

#### New South Wales.

Mr. F. Chilton, City Fruit Markets, Haymarket, Sydney, reports, on 24/6/26:—

Queensland fruits:—Bananas, 16/- to 30/- per case; Pines, Smoothleaf, 15/- to 21/-; Custard Apples, 4/- to 6/- per quarter case; Tomatoes (N. Queensland), 4/- to 12/- per half case. N.S.W. fruits:—Bananas, 16/- to 30/- per case; Lemons, yellow, 5/- to 8/- per bushel case; Oranges, Siletta, 5/- to 7/-; Navel, 7/- to 12/-; Mandarins, Emperor, 8/- to 13/-; eating Apples, London, 3/- to 9/-; R.B., 8/- to 12/-; Granny Smith, 9/- to 15/-; Passions, 10/- to 25/- per half case. Vic. fruits:—Apples, Jon., 6/- to 10/- per bushel case; Pears, Kieffer, 5/- to 8/-; Jos., 9/- to 14/-; B.B., 7/- to 13/-; M.L., 8/- to 11/- Tas. fruits:—Apples, S.P.M., 6/- to 11/- per bushel case; F.C., 6/- to 9/-; Jon., 6/- to 11/-; Cleo., 6/- to 9/-; Del., 6/- to 10/-; Geveston Fanny, 6/- to 10/-; Pears, W.N., 3/6 to 6/- per half case; Giblin, 3/- to 5/-; W.C., 4/- to 7/-; Jos., 3/6 to 7/-.

The demand for choice lines of red Apples, also Pears, still remains firm, but the market is very dull for small and medium quality fruit. Emperor Mandarins have increased in value owing to short supplies, and a further advance in price is expected in the near future. Common Oranges and Lemons are well supplied and selling slowly.

#### Tasmania.

Hobart, 19/6/26.—Apples, C.P.M., choice, 7/6 to 8/1; others, including small, 4/1 to 5/6; S.P.M., good, 6/- to 6/3; fair, 5/- to 5/7; medium, 4/- to 4/9; small and spotty to 3/6; N.Y.P., choice, 5/6 to 6/-; good, 5/- to 5/4; medium, 4/- to 4/10; small and spotty, 1/9 to 3/11; F.C., No. 1, fair, 5/-; small and medium, 4/- to 4/6; B.D., to 3/6; M.F., to 3/7; Jon., No. 2, fair, 3/6 to 4/-; small to 3/- S.T.P., No. 1, fair, 4/- to 4/6; medium and small to 3/9; Dem., small and colored, 5/1 to 6/-; Pears, G.M., 3/7 to 3/8; W.N. (small), 1/7 to 2/5 per half case; N. Pears to 4/- per case.

#### West Australia.

Perth, 17/6/26.—Apples, Dunns, dumps, 8/6 to 13/3; flats, 5/- to 8/-; other dumps, 4/6 to 8/6; Cleos., prime dumps, 9/- to 12/- (a few to

13/3); flats, 5/- to 8/-; other dumps, 5/6 to 8/-; Granny Smiths, prime dumps, 11/- to 16/3; flats, 7/- to 10/6; other dumps, 5/- to 10/- Yates, prime dumps, 9/- to 14/6 (special to 16/9); flats, 5/- to 7/6; other dumps, 5/- to 9/-; Jons. (a few), dumps, 8/- to 12/6; Romes, prime dumps, 8/- to 11/- (a few to 13/-); flats, 4/6 to 6/-; other dumps, 4/- to 7/6; Doherty's, 8/6 to 14/-; flats, 4/6 to 6/6; other dumps, 5/- to 8/-; Rokewoods, prime dumps, 8/- to 11/6; flats, 4/- to 7/-; other dumps, 5/- to 7/6; Pears, dumps, 5/- to 11/- flats, 2/6 to 7/3; Oranges, flats, 2/6 to 5/6; Valencias, 3/9 to 5/6; Navels, dumps, 6/6 to 8/6 (special to 11/3); flats, 4/- to 7/- (special to 9/6); Mandarins, 5/3 to 14/- (special 16/-); Lemons, flats, 2/6 to 6/9; Cape Gooseberries, 5½d. to 7d. per lb.; Passion Fruit, quarter cases, 10/9 to 20/-.

#### South Australia.

Adelaide, 19/6/26.—Apples (eating), 7/- to 8/- per case; cooking, 6/- to 7/-; Lemons, 7/-; Oranges (common), 7/-; Mandarin, 14/- to 16/-; Navel, 10/- case; Poorman, 7/-; Passion Fruit, 25/- to 30/-; Pears, eating, 10/-; cooking, 6/-.

#### Queensland.

Brisbane, 22/6/26.—Lemons, prime, 4/- to 5/-; choice, 2/6 to 4/- per half case; 8/- to 9/- per bushel case; Limes, 4/- to 5/- per half case; 8/- to 9/- per bushel case; Pineapples, roughleaf, prime, 3/- to 3/6; others, 1/- to 2/6 a dozen; 4/- to 6/- per case; smoothleaf, prime, 5/- to 7/-; others, 2/6 to 5/-; 1/- to 4/- per dozen; Passion Fruit, 7/- to 11/- per half bushel case; Oranges, 5/- to 8/-; Navel, 7/- to 14/- per bushel case; Mandarins, 6/- to 11/-.

#### Victoria.

Melbourne, 26/6/26.—Western Market, per case: Apples, Jon., choice, 8/- to 11/-; other descriptions, from 6/- to 9/-; Five Crowns, 7/- to 10/-; other cooking varieties, 4/- to 8/-; Pears, Beurre, Bose, 8/- to 10/-; other Pears, 3/- to 5/-; Bananas, choice, 28/- to 33/-; inferior, lower; Pineapples, Queen, choice, 18/- to 22/-; Passion Fruit, Vic., 22/- to 24/-; others, 14/- to 17/-; Navel Oranges, A quality, special, 13/- to 16/-; B grade, 12/- to 14/-; C grade, 9/- to 12/-; standard and plain, 1/- to 2/- lower; Mandarins, best large, special, 10/- to 18/-; small to medium, special, 10/- to 14/-; Common Oranges, best counts, special, 11/- to 13/-; Lemons, 6/- to 9/-.

The V.C.C.A. Market Representative reports for week ending June 19:—Practically all stocks of Lemons cleared. Good lines of common Oranges selling freely. Navels, A grade special, 12/- to 15/-; wrapped to 16/-; B grade special, 11/- to 14/-; C. 10/- to 13/-; standard and plain in all grades, from 1/- to 2/- per case lower; common Oranges, special, 9/- to 12/-; others, 7/- to 9/-; Lemons, 6/- to 8/-; Mandarins, A grade, large,

16/- to 18/-; B, 14/- to 16/-; small poorly colored and medium, 10/- to 12/-.

#### New Zealand.

Dunedin, 10/6/26.—Reilly's Central Produce Market reports keen enquiry for choice Delicious Apples. Full supplies of Oranges, Bananas and Grapes are coming forward. Pears, choice desserts to 2½d.; cookers to 2d.; Grapes, Australian, 1/-; Gros Colmans to 2/9; Apples, Delicious to 10/6; Cox's to 12/6; Sturmers to 9/-; other desserts to 7/6; choice cookers to 6/6; others to 4/-; Passion Fruit, N.S.W., 16/-; Lemons, Italian, large cases, 35/-; halves, 20/-; Adelaide, to arrive, 22/-; Oranges, Raratonga repacks, 20/-; Bananas, ripe, to 35/-; green Suvas, 25/-.

#### REILLY'S FRUIT MART BURNT.

On June 7 a serious fire occurred in Dunedin, when the premises of Reilly's Fruit Mart, in Lower Moray Place, were almost completely destroyed, and damage amounting to between £4,000 and £5,000 was done to the stocks of fruit and produce. Over £6,000 worth of mixed produce was stored in the mart, and insurances amounted to only £2,300. Much of the stock had been consigned to the firm, and Mr. Reilly stated they intended to pay the consignors the full market value for their goods. The building had been used as a produce mart for 21 years. A garage was also destroyed, and adjoining buildings damaged, but good work by the fire brigade saved the fire from spreading. Messrs. Reilly's advise that they have secured temporary premises at Kroon's Hall, and are carrying on their business pending rebuilding.

#### ACKNOWLEDGMENT.

The illustrations on the front cover and on pages 309 and 315 were courteously supplied by the "Leader."

#### SUBSCRIBERS PLEASE NOTE.

We have to advise subscribers that accounts have been sent out for the year ending June 30. The work of the management is greatly facilitated by prompt attention to such matters, and in order to clear our books, we shall be glad to receive subscription renewals as early as possible. Many have already responded, and the list of subscribers will be published next month.

#### COOPER'S ARSENATE OF LEAD PASTE.

Messrs. Wm. Cooper and Nephews (Australia) Ltd., manufacture the finest possible grade for orchardists who require their arsenate of lead in paste form. Prices:—100 lb. kegs, 9d. per lb.; 50 lb. kegs, 10d. per lb.; 25 lb. kegs, 11d. per lb. Victorian Agents: NEWELL & CO. PTY. LTD., 189 King Street, Melbourne.





## From May until January 108 dozen eggs from 8 fowls

**J**UST note the months stated above—from May, right through the winter up to January. This period covers the coldest months of the year, and two of the hottest. Yet the monthly average for these eight birds is twenty eggs each. Wouldn't you like your fowls to be doing as well? Wouldn't you like to be getting a regular supply of fresh eggs from your own fowls instead of depending on the grocer? If you keep fowls, you have to feed them. Then why not give them Karswood, and, like all other users of this wonderful Poultry Spice (which contains dried and ground insects) have a daily supply of home-produced eggs. Think, too, of what you would have, apart from the satisfaction of knowing every egg you use is fresh. Karswood costs only one-half-penny a day for 12 birds. Could anything be more economical?

Mrs. Walker, whose testimonial we quote below, is but one of hundreds of satisfied users of Karswood Poultry Spice. Her success, too, is but one instance of the almost universal successes resulting from feeding with Karswood.

### Speaks for Itself.

Dear Sirs,—

Since hearing from England a few years ago of the wonderful results from using Karswood Poultry Spice, I have given it a fair trial, and can truthfully say it is all it claims to be. The following is one of my many good results. One winter three years ago I had only eight hens, and from May until January, I got 108 dozen eggs from those hens, which fact speaks for itself. I fed them with a hot mash every morning, in which Karswood Spice was mixed, and they got grain at night; nothing else was given them except, of course, they were let out on the grass for a few hours a day. You are welcome to make what use you like of this letter, as I think it only fair to let others know of a good thing. My mother in England writes that she has always had good results when using Karswood Poultry Spice. Wishing Karswood's every success,

(Sgd.) MRS. A. WALKER.

### 10 Eggs A-Day from 11 Hens.

Dear Sir,—

I have been using Karswood Poul-

try Spice for six months, and after a fortnight's use I have not been a single day without eggs. Previous to this, my birds, although well fed, simply would not lay except an occasional egg. They are getting exactly the same quantity and manner of food now as previously, yet for the past six months I have had 7-10 eggs per day from only 11 hens, and this through the winter months. I think Karswood is "great."

(Sgd.) MRS. V. SIMMONS.

Jerralong Mail, via Morwell, Gipps-land.

### Nearly Double the Number of Eggs.

Dear Sirs,—

I would like to express my appreciation of Karswood Poultry Spice. Since using same, I get nearly double the number of eggs, and the hens get over the moult much quicker. I have used Karswood for years, and would not use anything else. I have recommended Karswood to a number of friends, and their experience has been the same as mine.

(Sgd.) VERA SHERWILL.

Officer, Vic.

### Nearly 23 Eggs per Month.

Dear Sirs,—

Six Black Orpington pullets, fed once daily on Karswood Poultry Spice laid 396 eggs from 5th August to 31st October. The last month they laid 160 eggs. Fifteen pullets of the same breed from 1st August to 31st October laid 626 eggs, which had not Karswood Spice. I am sure Karswood is the best egg producer on the market, and will always recommend it. The figures equal—

22½ eggs per month with Karswood.  
13½ eggs per month without Karswood.

October the Karswood birds increased their record to 26½ per bird.

(Sgd.) L. J. COLEMAN.

Don Road, Devonport West, Tas.

### 310 Eggs—1 Month—15 Hens.

Dear Sirs,—

I am sending you some results from feeding with Karswood Spice. I commenced feeding with Karswood last February, and the effect was quickly noticeable. I started with seven White Leghorns and seven Black Orpington pullets, and one old Black Orpington hen, and no rooster. From February 8th to February 8th this year, they laid 2,565 eggs, or an average of 171 eggs each for twelve months, the highest production was 310 for one month, and they showed a profit of £10/10/-. Facts speak for themselves.

(Sgd.) P. VEEVERS.

5 Federal Avenue, Ashfield.

### Make This Test.

Go to your local grocer, store-keeper, or produce dealer. Get a 1/- packet of Karswood Poultry Spice, and give it to half-a-dozen of your birds, in accordance with the directions on the packet. Do not expect immediate results—Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

### Note the Economy.

- 1/- packet supplies 20 hens for 16 days.
- 2/- packet supplies 20 hens for 32 days.
- 13/- (7lb. tin) supplies 140 hens for 32 days.

### Supplies.

Karswood Poultry Spice is obtainable from all stores and poultry food suppliers at the following standard prices: ½ lb. packet, Price 1/-. 1lb packet, Price 2/-. 7lb. tin, Price 13/-. 14lb. tin, Price, 25/-. 28lb. tin, Price 48/-.

If your local dealer cannot supply you, write direct to Henry Berry & Co. Pty. Ltd., Collins St., Melbourne, adding postage—6d. on ½ lb. packets, and 9d. on 1lb. packets to the above prices.

# Poultry and Beekeeping

The Age for Culling.

IN answer to a correspondent who asked, "At what age do fowls become unprofitable to keep?" Mr. F. C. Brown, Chief Poultry Instructor, New Zealand Department of Agriculture, writing in the "Journal of Agriculture" for May, says:—

As with many other things connected with poultry, this question can be decided only after consideration of the quality of the stock and of the local conditions surrounding them. For example, in almost every flock are to be found individual birds that it will pay to discard at, or even before, the termination of their first laying season—in other words, when they are about 18 months old. The proportion of birds that should be culled from the flock at this age largely depends on the quality of the parents which the stock is bred from, also the manner in which the latter have been fed and managed.

The wise poultry-keeper who ensures that no bird is bred from unless possessing outstanding points indicative to strong constitutional vigor and productive power, and, further, takes special care that the young stock are well fed and managed right through the whole of the developing stage, will have in his flock very few birds which will not more than pay their way for at least two laying seasons. Indeed, in a well-bred and well-managed flock of highly productive fowls, many hens will be found that will give a profitable egg-yield (over the cost of their keep) right up to the end of the third laying season.

Thus the question of the correct age at which to cull fowls can be decided only in accordance with the quality of the individual members of a flock. Of course, it will seldom or never pay to keep a bird beyond the third laying season, unless it is of a noted breeding-type and is required for the breeding pen. The man of experience with a trained eye for form, can, with a great degree of certainty, by the observation of particular points in a bird, ascertain at a glance whether it possesses high or

low egg-producing capacity, and whether it will pay or not to retain it in the flock, and this quite irrespective of the age of the bird.

## POULTRY MARKET.

SYDNEY, June 11.

"Apto" (Australian Poultrymen's Trading Organisation), although not a broadcaster, weekly speaks to a large and varied audience per medium of the city and country press, and as in the present case, it is a pleasure to find a new and promising avenue of dissemination. May we assure readers of the "Fruit World" that we shall do our best to provide accurate market reports.

The past four weeks have been as a series of upward steps in poultry values, the present week's prices proving exceptionally good, but for all that, being but as an important halting place on a journey not to be completed till July has passed. Three weeks ago White Leghorn hens averaged 4/6 per pair, while Thurs-

day's rate works out at about 6/9 per pair. At about the same time mentioned, heavy colored hens were held at not beyond 8/-, while on Thursday 10/- was common, and at least 11/- was touched. Cockerels have been dear for weeks, but continue to harden and we are hopeful that high rates can be maintained till Christmas. Muscovies are dear and should be dearer in July, old or "red head" ducks being nearly as good value as are young sorts. The turkey season is now in full swing and fully bears out our forecast, made six months ago, that the season would prove exceptionally dear.

Current prices are, per pair:—Squabs, 3/6, 4/6; pigeons, 2/6 to 2/9; poussins, 2/6 to 3/-; grillers, 4/6 to 8/-; W.L. cockerels, 8/6 to 11/-; colored cockerels, small, 8/- to 9/-; medium, 9/6 to 10/6; heavy, 11/- to 15/-; W.L. hens, 4/6 to 7/2; colored hens, light, 5/- to 6/-; medium, 6/6 to 9/-; heavy, 9/6 to 11/-; special, 12/-; Muscovy ducks, 7/- to 8/3; Muscovy drakes, 10/- to 13/-; turkey gobblers, 25/6 to 50/-; turkey hens, 15/- to 28/6.

## BEEES AND HONEY.

### Care of Surplus Combs.

#### Treatment for Storage Through Winter.

Owing to the drought conditions experienced late in the season in the inland districts (writes the Senior Apiary Instructor of the New South Wales Department of Agriculture), a

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Essentially a Poultry Farmer's Selling Floor

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TURKEY, EGG AND POULTRY SALESMAN

7, 8 and 9 MUNICIPAL POULTRY MARKETS, ULTIMO  
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greater number than usual of surplus combs will be stored over the winter. These combs are of much value; it is the apiarist with an ample supply of good combs during spring who is in a position to build up his colonies to the best advantage.

When combs have to be stored for any length of time, care should be taken to prevent damage by the wax moth larvae. As the pest is not so troublesome during the winter months, the removal of one comb from each body and the piling up of the bodies on four tins, so as to prevent damage by mice, will usually suffice as a protection. No cover or bottom board should be used, so that air may circulate through the pile freely. The room in which the bodies are stored must be bee-proof, to prevent any robbing by bees. Some apiarists place a wire cloth screen top and bottom of the pile. The combs should be examined about once a month during the winter, and any showing signs of infestation should be set aside for fumigation. During the early spring, populous colonies of Italian bees will take care of a few of the surplus bodies and combs.

#### Fumigation with Carbon Bisulphide.

The remaining piles should be treated in the following manner:—First scrape all propolis from the top and bottom edges of the supers, in order that the bodies may fit tight, and thus retain the gas. On top of each set of combs place a cloth about 10 inches square (doubled) and over this pour a tablespoonful of carbon bisulphide. Cover the cloth with two thicknesses of newspaper to ensure a tight joint, and place another body on top and treat in the same way, continuing as high as you wish to go.

Carbon bisulphide is a poisonous and very inflammable gas, and great care is therefore necessary in its use. Fumigation is best carried out under a verandah or in the open, and if the work is done indoors there should be ample opportunity for the free circulation of air if risk to the operator is to be avoided. On no account should a light of any sort be allowed in the vicinity of the gas, as a spark

is quite sufficient to cause an explosion.

#### Fumigation with Sulphur Fumes.

Sulphur fumes, when united with air, form a gas known as sulphur dioxide, and are quite effective in destroying larvae in slightly infested combs, but heavily infested combs should be melted up. To fumigate with sulphur, prepare four or five bodies of combs, get a pan containing red-hot coals, on which a handful of sulphur is thrown, and immediately place over the pan an empty super, and then the bodies containing the combs; finally place a good close-fitting cover over all. The combs can be left for one hour over the fumes.

The sulphur treatment is not so effective as the carbon bisulphide; therefore, if combs have to be kept over a fair period, the carbon bisulphide treatment should be used. Car-

bon bisulphide is obtainable from almost any chemist.

#### THE NEW "PENANG" SIZER.

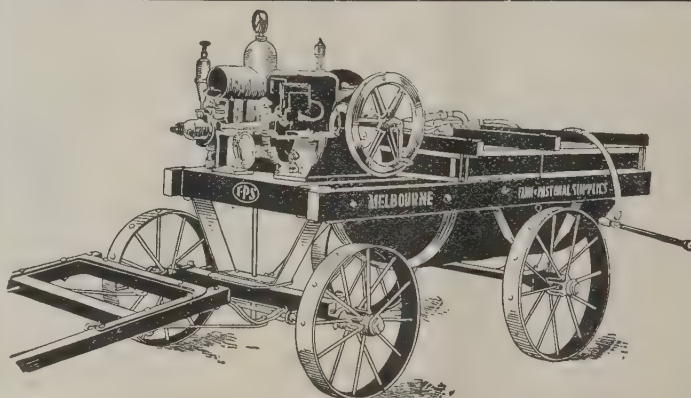
In another column the "Lightning" Fruit Grader Co. draw attention to their New "Penang" Sizer, a seven-grade machine, suitable for both Citrus and stone fruits. This grader is said to prove eminently satisfactory, and is priced as low as £20. Special mention may be made of the fact that all orders for this model booked before July 31, will be subject to 5 per cent. discount for cash.

MARCUS AURELIUS ANTONIUS has said:—"Pass through this little space of time conformably to Nature, and end thy journey in content." He is a counsel which mankind may well follow, but the fitness of old age and its blessings are only for those who in youth and middle age have kept themselves healthy. Among the worst pests that attack humanity are ills of the Liver and Digestive Organs. A.M.S. Digestive and Liver Tonic will cure you of these troubles. It is the most effective remedy dispensed. Try it, and you will have health and happiness and bless nature who produced you. Sold by all chemists and country storekeepers, 3/-; by post, 3/6. Manufactured by T. A. Dickson, Chemist, Geelong, Vic.



GIBBS, BRIGHT & CO.—See Page XIV

## THE NEW HERCULES SPRAYER



Two guns at full 300 lbs. pressure—this is the achievement of the New HERCULES Sprayer, which consists of a 1½, 2½, or 3½ B.H.P. HERCULES Engine geared direct to a Metters' Power Pump. If you have a Power Sprayer already, let us quote you for fitting our engine or pump, or both. Write at once for particulars, or apply for a FREE DEMONSTRATION in your own Orchard.

**THE FARM & PASTORAL SUPPLIES**  
PTY. LTD.  
Machinery Merchants,  
500 BOURKE STREET, MELBOURNE

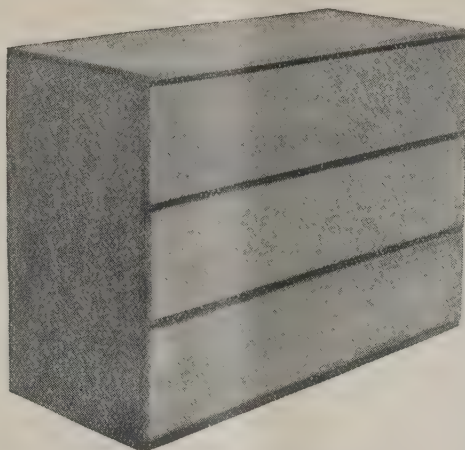
## FRUIT TREES

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Australian Apple and Citrus Dump Bushel Case.

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DUMP BUSHEL with one piece top and three equal piece side

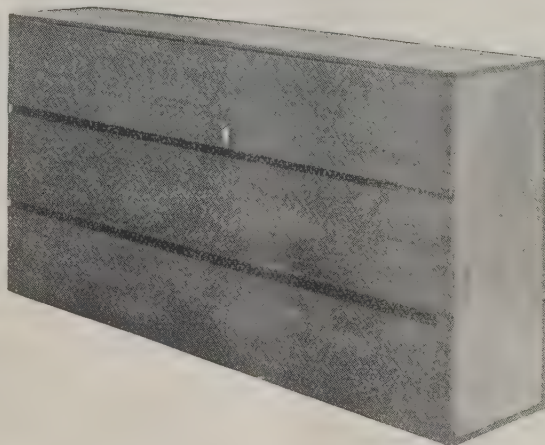
UPRIGHT BUSHEL with one piece top and three equal piece side

DRIED FRUIT CASE with one piece side and two equal pieces tops and bottoms

CANNED FRUIT with one piece side and two piece tops and bottoms

### SOME ADVANTAGES IN FAVOR OF IMPORTED CASES

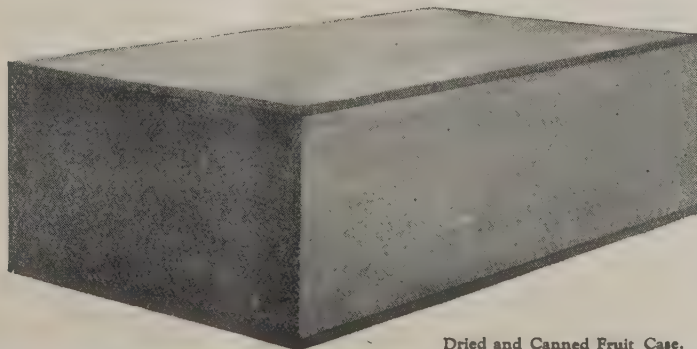
- (1) Full drawback of duty allowed on all cases exported.
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# Cherry Culture.

Planting : Pruning : Varieties.

SOME of the problems of Cherry growing were recently dealt with by Mr. W. H. Brown, in the "Agricultural Gazette" of N.S.W., and the following notes will be of interest.

## Cross Pollination.

It is now generally recognised that certain varieties crop better when planted near to others that flower at the same time; and this has to be taken into account in planting large blocks for commercial purposes.

The problem is necessarily a complex one, and the more so owing to

the variety of soil and climatic conditions under which the crop is grown; but certain lines are defining themselves. Among early varieties, for instance it would seem that Early Lyons, though often planted in large blocks with apparent success, generally sets better crops where it is grown in proximity to another variety flowering at the same time. This is particularly evident in the Young district, where the setting is heavier, more consistent, and more uniform if Early Purple Guigne is near at hand. In one orchard recently the decline of the crop in a block of Early Lyons as the distance from a block of "E.P.G." increased was most apparent. Light settings in large blocks of Early Lyons are not invariable, but the facts are sufficiently consistent to suggest that intending growers will do well not to plant more than two or three rows of this variety in a block.

St. Margaret is another that frequently exhibits a disposition not to self-fertilise its blossoms. By some growers, in fact, it is regarded as an erratic cropper, but the possibilities are that it merely requires some other variety that will cross-pollinate it. Florence, a variety of very similar habit as to blossoming (and in itself apparently little dependent on other varieties for fertilisation), is highly

suitable for planting alternately with St. Margaret. In one orchard at Young the setting of St. Margaret near to Early Lyons was light, but it distinctly improved as rows of Florence were approached and the grower is working over a few scattered trees among his St. Margarets to Florence. At Orange, Mr. D. D. Atkins, orchard inspector, remarked that Napoleon also served St. Margarets excellently in effecting cross-pollination, adding that "it is worth growing for that alone, even if the Napoleon crop is not marketed."

## To Prune or Not to Prune.

The shaping of the tree by pruning and thinning is another factor of importance in making an orchard and in maintaining it in profit. The lines upon which the young tree should be handled have already been indicated, the general idea being that for the first few years attention must be directed to getting a good framework, after which the knife should be seldom used if at all.

In fact, the cherry tree has generally been regarded as requiring no pruning once it is in bearing, but the doctrine requires to be accepted with reservations. There are some men of experience who consider that practically all varieties should receive a certain amount of attention at regular intervals, and there are one or two varieties as to which it is almost unanimously agreed that they require some pruning most years if not all.

Mr. Thornell expressed himself as believing that "pruning every second year would benefit all varieties after full growth and bearing have been reached," and there are growers who

# "GREEN CROSS"

## Arsenate of Lead

## .. Powder ..

For  
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DOES NOT BURN  
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WASH OFF.

Mixes instantly and remains uniformly suspended in Spray-tank.

1 lb. of Green Cross Powder is equal to from 2 to 3 lb. of the best Arsenate of Lead Paste.

25 lb. Drums . . . 1/10 per lb.  
50 lb. " . . . 1/9 " "  
100 lb. " . . . 1/9 " "  
200 lb. Barrels . . . 1/8 " "

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Clyde Street, Hobart, Tasmania



agree with him, one at Orange advocating letting the tree alone for a few years after it has been well formed, and then pruning regularly after it begins to crop.

With the cherry tree the formation of the fruit buds does not generally require to be encouraged by pruning, as with other classes of fruit trees, but a certain amount of training and thinning out seems desirable in most varieties. Some attempt should be made to keep the crop within reach of the ground where possible, though, of course, in the case of the big Mazzard trees ample room for growth and for the elaboration of the plant sap is essential and encourages early cropping.

As to the necessity for pruning Early Lyons, practically all growers appear to be agreed. The tree is of spreading habit, tending to run out to fine extremities that droop heavily with the weight of the crop. The effect of cutting back these fine terminals is to throw the crop into the body of the tree, where it is carried with greater safety and tends to be of better quality. Some growers carry out their pruning by removing the slender tips after the crop is off, but others prefer to do the work as a winter operation. Men who also grow other classes of summer and

autumn fruit are not likely to be able to spare much time for summer training and thinning, and the work has to wait for the winter. It is necessary to see that cutting back is to wood that will carry sap, or the leader will die back for a few inches, and gumming will ensue.

**Eagle's Seedling**, a variety of increasing popularity in the Young district, requires to be pruned with a view to maintaining a number of small leaders. If the leaders are too few in number they become very long, and the tendency is for the crop to set only on the tops, whereas with a larger number of smaller leaders the crop is set all the way up, and is consequently heavier, safer, and more easily handled.

Florence also repays a certain amount of attention in this respect. If pruned from time to time the fruit buds are better developed and the setting of fruit is also better.

In one orchard at Young an example was furnished of "how not to do it." An Early Rivers was found that had been pruned in the winter with the result that the crop matured at least three weeks later than it should have done. Had the fruit been marketed when ripe it would have met the competition of better varieties, and would have been practically

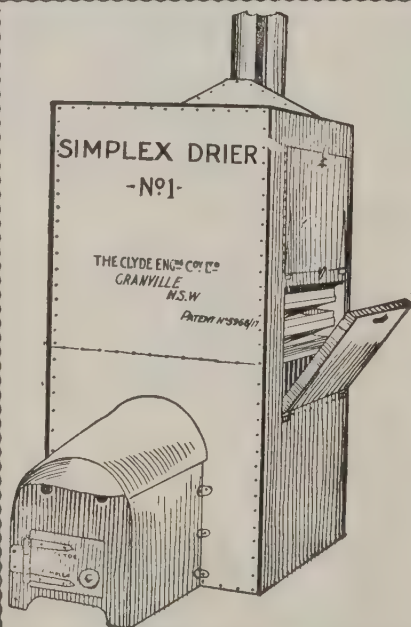
worthless. Alongside was another tree of the same variety, which, not having been pruned, had matured a crop that, though lighter than the other, ripened at the right time, and had been already profitably marketed.

An interesting application of the **fire smudge** as a preventive of frost injury in the spring was found in the Orange district. Mr. Howarth, at Clergate, makes a practice of collecting all rubbish and placing it in heaps along the southern side of the orchard about 20 yards from the nearest trees. When frost threatens the heaps are fired about 4 a.m., with the aid of discarded motor oil, the fire being made as smoky as possible by throwing on soil if necessary. The rubbish is collected from all sources, and often has to be brought in from the bush. If, owing to a mild spring, it is not necessary to fire the rubbish, it is carted away before summer. The practice involves labor, of course, but the programme is gone through each year, and is regarded as profitable.

#### Some Leading Varieties.

The task of obtaining a systematic account of the varieties grown in the State would be monumental, but a few facts collected about some of the best known may be of interest.

The earliest variety of any commercial importance is Early Purple



## The Clyde Simplex Driers

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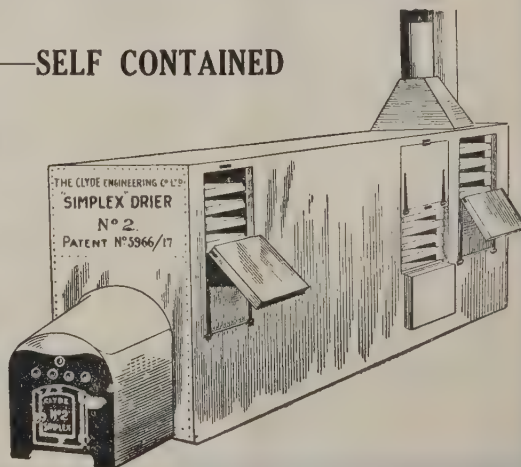
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— Agents for —

**"BLACK LEAF 40"**  
and all Orchard Requirements

Melbourne Sydney  
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Guigne. It is followed by Burgdorf's Seedling and Early Lyons. Early Rivers also has had admirers, but they are not many to-day. Burgdorf's Seedling carries its fruit in close clusters under dense bunches of leaves, which provide an unusual amount of protection from hail and heavy rain. It is somewhat impartial in the matter of stock, doing well on either Kentish or Mazzard, providing the peculiarities of the stocks themselves are regarded. Early Lyons is now the general favorite for the early crop on account of the size and quality of the fruit, and the weight of the crop. The greatest disadvantage attaching to it is the ease with which it splits if rain falls when it is nearly ripe.

Following these may be mentioned Eagle Seedling, a variety that is gaining favor in the Young district, particularly on account of the excellent quality and flavor of its fruit. It is perhaps a trifle later than Early Lyons, is of very erect habit, and, properly handled, it distributes a

heavy crop along long leaders that nevertheless are easily handled. The tree is of vigorous habit, so vigorous in fact, that for the first season or two the fruit tends to split rather readily, but it improves in this respect as it matures.

Werder's Early Black packs and sells well, but the fruit is a bit small and not equal in flavor to Early Lyons and Eagle Seedling, and the trees are apt not to withstand drought so well.

Bedford's Prolific is a heavy cropper and profitable to the orchardist, though, we were assured, not so good for the consumer as an attractive appearance might suggest.

As main season and late season varieties, Florence and St. Margaret are outstanding. Both are consistent, heavy croppers, both yield fruit of good firm quality that carries well, and both are ready to market at the height of the summer and of the holiday season, meeting, thus, a good market. In color they are complementary one to the other, Florence being light and St. Margaret dark, so



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that they meet the public eye in a harmonious contrast when properly graded, packed, and displayed.

The peculiarities of these two varieties in respect of pollination and of pruning have already been mentioned. Florence is rather the handier tree to pick, carrying its fruit more accessibly, but it exhibits a disposition to shed a larger proportion of small fruit and to shed them later than do most other varieties. It is generally regarded as one of the worst of varieties in regard to gumming. St. Margaret requires consideration in regard to pollination, as already explained.

Noble is a useful variety with which to close the season. It comes in a bit later than St. Margaret, but is very like that variety, and therefore usually meets a good sale, though some growers regard it as rather soft and therefore not too good as a carrier.

A number of other varieties are favored by various growers, though mostly in small blocks, the larger plantings generally being one or more of the foregoing.

Black Republican, rather resembling St. Margaret, but ripening a bit later, and Napoleon of about the same season, but easily marked and bruised in handling are the most extensively grown of the rest, though, indeed, "the rest" are somewhat numerous.

#### OVERHEARD AT PORTLAND.

#### Pomologist as a Judge of Cows.

When officials come here from America and other countries wearing high-sounding titles to indicate their expertness in certain lines, we are inclined to accept their advice on all subjects rather than that of our own authorities. But apparently our "experts" enjoy their triumph elsewhere.

A well-known pomologist recently touring North America, happened to reach a small British Columbian town at the time of the local show, and was invited by the horticulturist to help him judge the fruit sections. During the judging, the Secretary of the show came up and remarked to the Australian—"I believe you Australians are excellent judges of live stock."

Of course, Mr. X modestly replied that we were—the best in the world.

"Well," said the Secretary, "the judge for our livestock sections has not turned up. What about you doing it?"

"Righto," said Mr. X, taking it as a joke. But when the Secretary had gone, the American fruitman turned

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to him and said, "Are you a judge of livestock?"

"Don't know a thing about them," said the Australian.

"Then what did you offer to judge for?"

"But surely, it was only a joke?"

"No jolly fear it wasn't," said the American. "What are you going to do about it?"

Efforts to find the Secretary and put the matter right were unavailing; and eventually the American persuaded Mr. X that the only way out of the difficulty was to carry on and do the judging, so, as each knew as little as the other about livestock, they decided to do the work together.

First a pair of orchard horses were brought out, and feeling quite at home with anything connected with orchards, Mr. X awarded the prize. Then came the harness horses, and

presently some calves, which caused quite a lot of deep thought on the part of the amateur judges, but everything appeared to be going satisfactorily.

When they came to the dairy section, a beautiful Ayrshire was led out, and the American said—"Well, there's no need to go past this—we can't go wrong here. Let's give her first prize."

But Mr. X was cautious. He walked round the cow, scratched his chin, and tried to look very wise, for the benefit of the waiting circle of stockmen; then he drew his confederate aside—"I don't like the look of her. We'll look at the next."

"But, heavens, man! you can't get anything better than this!"

"I don't like her," said Mr. X. "I don't know why, but I don't."

They discussed the matter earnestly

in whispers, but finally the Australian won his point, and the prize was awarded to another cow.

They worked their way through the various sections, and when the judging was over a man came up to Mr. X and introduced himself, saying—"I am a veterinary surgeon; I was watching you judge the livestock."

Mr. X glanced wildly round, and wished he had never left his native land. But the American continued: "I saw you judge the dairy cattle, and must congratulate you on your award. Not one man in a hundred would have seen the fault in that cow."

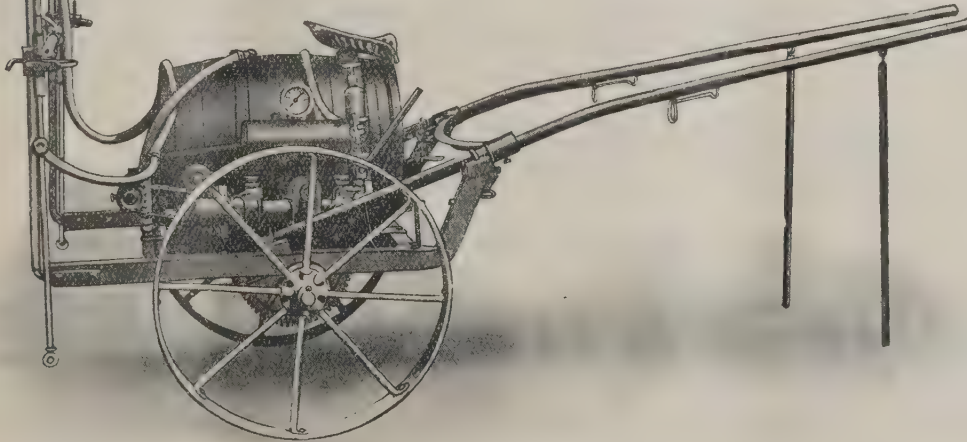
Mr. X smiled with relief and becoming modesty, and said, "Oh, of course it was obvious to anyone who knew anything about stock." But he is still wondering what was wrong with that cow.

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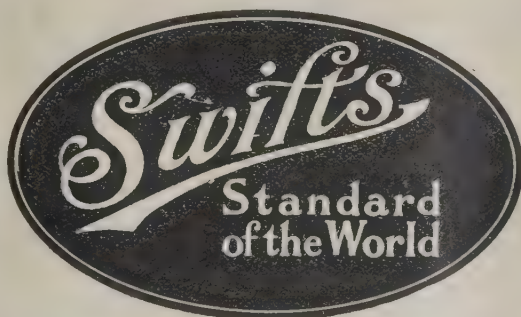
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Inferior Sprays are dear at any price, and it is folly and waste of money and time to use them.

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SWIFT'S does not damage Trees or Fruit.

SWIFT'S improves Quality and Color of the Crop.

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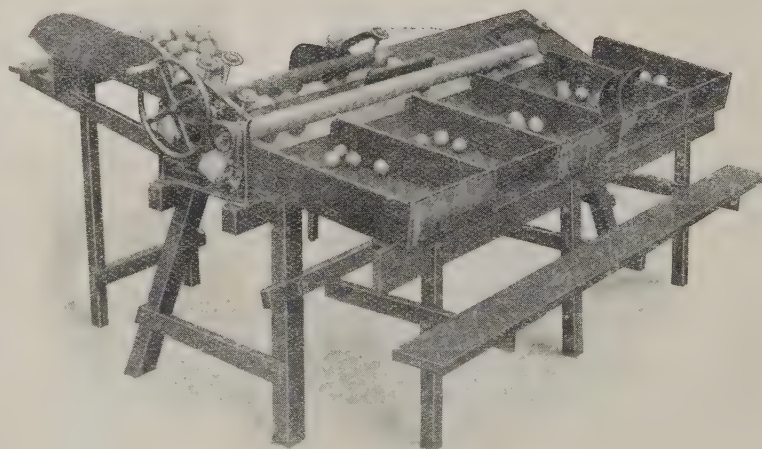
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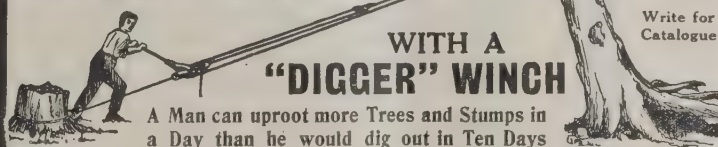
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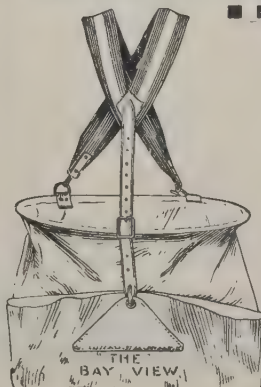
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“Derrisol 50” is recommended for Woolly Aphis at the usual spraying strength when used in conjunction with 1% of solution of “Arboleum” Spraying Oil in Summer and 2% solution in Winter.

It does not cause distressing effects to man and horses engaged in spraying.

“Derrisol 50” will be found to be most efficient for the destruction of Black and Green Aphis on Cherry, Peach or Citrus trees, but early spraying is essential for good results. “Derrisol 50” is also the ideal remedy for use against sucking insects in the vegetable and flower garden.

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### HOW TO USE “DERRISOL 50.”

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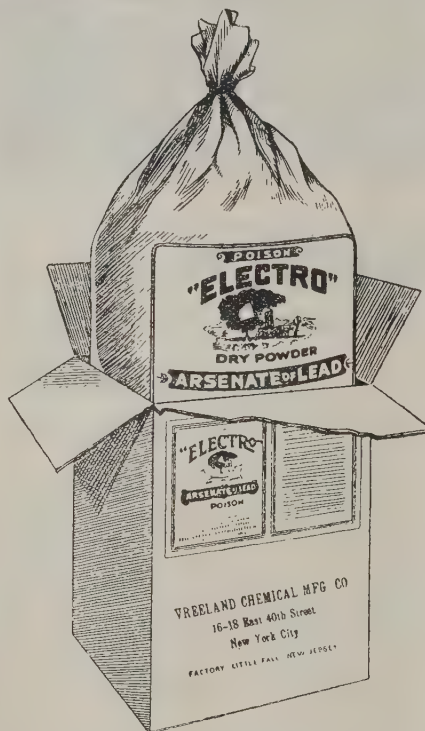
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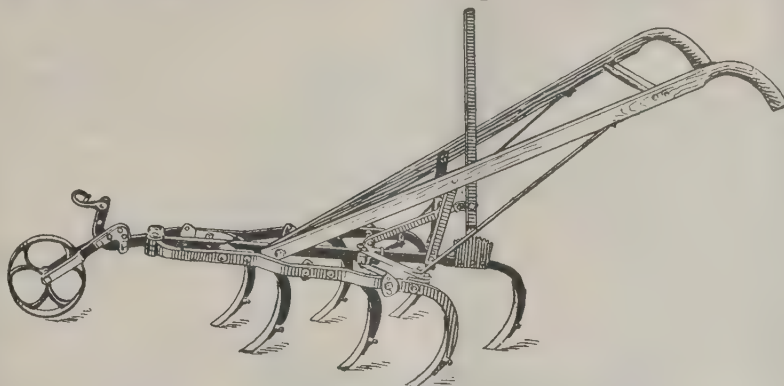
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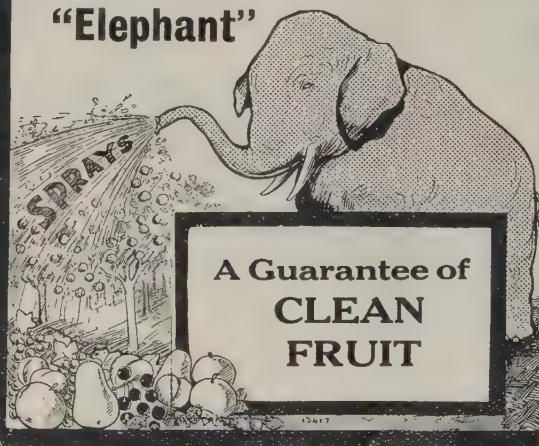
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should use only the best Fruit Sprays,  
therefore ask for and see that you

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## **"Elephant" Brand**

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**PREPARED RED OIL**

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To obtain the best results it is necessary to spray thoroughly and frequently with Arsenate of Lead. This takes up considerable time, and is costly. It is therefore all the more necessary to use the Best Brand obtainable. To be sure of this, see that you use "ELEPHANT" BRAND, which has been proved to be not only the most reliable on the Australian market for many years, but the Highest Grade of Arsenate of Lead still obtainable.

Since the Wonderfully fine "ELEPHANT" BRAND ARSENATE OF LEAD came on the market years ago, numerous tests carried out by the various Government Agricultural Departments invariably show that this Brand stands alone. No other brand has shown consistently the very high qualities of "ELEPHANT" Brand. The figures published below speak for themselves,

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**Also buy—E.B. Lime Sulphur, Atomic Sulphur  
Spreader, Bordeaux Powder, Weed Killer  
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**"FRUIT WORLD OF AUSTRALASIA."**

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of each Month

Editorial and Management Notices.

**Articles and Photographs.**—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printer's MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked "Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

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Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

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"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States, as set out below.

Changes of copy for advertisements must be in our hands on or before the 17th of the month prior to publication.

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**R. E. BOARDMAN, A.F.I.A.,** Managing Director and Editor.

**E. H. WRAGG,** Secretary and Advertising Manager.

**Tasmanian Director:** HON. L. M. SHOOBRIDGE, M.L.C.

**APPLE EXPORT GUARANTEE.****Appeal for Government Assistance.**

**F**OR SOME YEARS PAST Apple growers in Tasmania have suffered from a number of unfortunate circumstances, and suggestions for Government assistance have been made from time to time. On July 15 a deputation consisting of Senators J. B. Hayes and Payne (T.), and Messrs. Parsons (S.A.), Prowse (W.A.), J. P. Piggott, M.H.A. (T.), and J. W. Bailey, interviewed the Minister for Markets and Migration (Mr. Paterson), regarding a guarantee to growers who had suffered losses in consequence of the disastrous general strike in England.

A statement prepared by Mr. Piggott (Manager of the Port Huon Fruitgrowers' Co-op. Association) was submitted. After referring to the Government assistance granted to the canned, Citrus, and dried fruits and wine industries, it was pointed out that the Apple industry was the only primary agricultural industry that had not been assisted by Commonwealth bounties. Last year, with only half a crop, the growers put all they had made back into their orchards in manures, sprays and labor, thereby improving the quality and quantity of fruit for export. This year the largest export of Apples had taken place—over 2,750,000 bushels—of which Tasmania supplied 2,100,000 bushels. Early competition of American fruit was being overcome when the British general strike caused chaos. Since then the coal strike had made the position worse.

On present information the average price for Apples would not reach 9/- a case. The cost of producing and selling Australian Apples on the home market was about 12/8 a case. The Tasmanian grower suffered more than any other, because he had to export half to two-thirds of his crop, and had no home market like the mainland grower.

It was suggested that the Government should guarantee the growers 1d. per lb. up to a maximum of 12/- a case in the event of losses since the strike commenced. That was, should the growers' average price on the whole of their shipments which had arrived in England since May 4 not reach 12/-, the Government would provide up to 1d. per lb. to recoup their losses, so as to maintain the industry and retain the export trade.

The Minister promised to bring the matter before Cabinet, but stated that any assistance granted would be con-

ditional upon the export industry being organised more efficiently than at present.

**"BROWN HEART" IN APPLES.****Underwriters Lose on Appeal.****The Case Now Goes to the House of Lords.**

In a recent test case regarding the "Northumberland" shipment of Apples, the underwriters sued the shipping companies for damage in transit and the latter secured the verdict, the court accepting the view that there was inherent defect in the fruit, and that "Brown Heart" was not induced by faulty carriage. On appeal the shipping companies again secured the verdict, Lord Justice Atkin dissented, but by a majority the court dismissed the appeal, with costs. The case has now been taken to the House of Lords for a final decision.

**QUEENSLAND REJECTS VICTORIAN FRUIT TREES.****A Regrettable Misunderstanding.****Scientific Tests Prove the trees Clean and Free From Disease.**

**Q**UEENSLAND, by proclamation, prohibits the entry of fruit trees "denotive" of hairy root or crown gall.

This disease is unknown in Victoria. Apple trees rejected at the Queensland border and returned to Victoria have been critically examined by the Victorian Government Plant Pathologist, Mr. C. C. Brittlebank and proved to be absolutely clean and healthy, the slight swelling at the roots being "denotive" of Northern Spy stock and nothing more—a natural characteristic which disappears as the trees come to maturity.

It is well known that where Apple, Plum, vine and other hard-wooded plants are raised by root grafting or by cuttings, swellings occur, which disappear with age. Pear trees as well as Apple trees have been condemned, apparently without proper examination.

The action of the Queensland Government appears to be unscientific. Victorian orchards and nurseries are freely open to be visited by Queensland experts. They will find, as the New Zealand authorities found a few years ago, that the disease is non-existent.

In these days of trained scientific investigation, scares are to be deprecated.

## Editorial Chats



### THANK YOU!

**D**URING the past few weeks it has been our pleasure to have been brought into more intimate touch with our readers throughout Australia and New Zealand. In renewing subscriptions, readers have been kind enough to express cordial appreciation regarding the information published monthly in the "Fruit World." Whilst these letters are too numerous for publication, we would like to take this opportunity of thanking our readers for their kindly expressions of appreciation, and to state that their action is not only encouraging, but stimulates us to use our best endeavors to publish such helpful information as will permanently benefit the industry.

It is our ideal, through the "Fruit World," to make the industry articulate, and to assist in the development of this very important primary industry. At all times our columns are open for the expression of the views of our readers.

### THE EDITOR.

### THE MONTH IN REVIEW.

**S**EVERAL matters of great importance came before the fruit industry in its several branches during July. These all demand careful examination, so that a considered opinion may be given, and the right action taken to assist in developing the industry.

#### Fruit Trees for Queensland.

The action of the Queensland Government in rejecting clean fruit trees from Victoria is a serious matter, both for the growers in Queensland who want the trees and appreciate their quality, and for the Victorian nurserymen who want to supply them. A similar trouble occurred with New Zealand a few years ago, when, acting under the impulse of a "scare," an embargo was imposed which was withdrawn after some years of agitation, a heavy duty on fruit trees being substituted.

In these days of scientific research, such matters should be dealt with, not amidst the hurly-burly of political considerations or talk of retaliation, but in the calm atmosphere of science.

#### Scientific Research.

The action of the Council of In-

dustrial Development in sending students abroad for further study of particular economic problems is a valuable step. Already scientifically-trained young men have been appointed to investigate the experience of other countries in regard to problems of food storage, forestry, cool storage and transport, and other matters of vital importance to Australia. After their several years' study abroad, these men will apply their special training to the solving of our local difficulties. In the several State Departments of Agriculture it is also noticeable that young men with University degrees are devoting their energies to scientific research, bringing their scientific experience to bear on the practical considerations affecting economic conditions.

There is a vast field for research work in the varied branches of fruit production and allied industries. It is in this realm that Government Departments can render the highest good to the industry.

#### Proposed Apple Export Control.

On account of the disastrous prices for Apples sent overseas last season, Tasmania, the principal sufferer, has asked for an export bounty of about 3/- per case to cover the cost of production. The Federal Government has refused to even consider the matter until the industry is better organised.

Whilst all growers are desirous of bringing about improvements in the industry and in getting the best possible returns for the export trade, there is great diversity of opinion in regard to the method of the attainment of ideal conditions. Some advocate an Export Control Board, whilst others, equally desirous of improving the trade, strongly oppose the Control Board idea. If the matter be approached in a spirit of toleration, and each section can give credit to the other for the sincerity of its intentions, a mutual understanding is capable of being arrived at.

By means of well-ordered co-operative associations in the varied branches of the fruit industry, growers in U.S.A. have secured effective control. They have made their calling prosperous by working in harmony with the wholesale and retail distributors and the general public. The co-operation, which commences

in the orchard, is effectively administered until the goods are delivered to the retail purchaser, sufficient funds being provided to create a demand and correct misunderstandings by means of advertising.

### The Petrol Tax.

The Federal Government proposal for a tax of 2d. per gallon on motor spirit for the upkeep of roads has been seriously contested. Proposals which would increase the price of petrol used in growers' commercial vehicles, motor pumps, engines, etc., would be a further heavy tax on primary industry.

### Workers' Compensation Act in N.S.W.

The Workers' Compensation Act, which became law in New South Wales recently under the Labor Government, while nominally designed to assist employees, has proved an intolerable burden on industry. Sawmills and other industries have had to close down, freights have been increased, and workers themselves are beginning to recognise the fallacy of class legislation.

Some people wrongfully imagine that there should be a state of perpetual war between employer and employee, between capital and labor, as well as between the producers and distributors of commodities. Economists, statesmen, and leaders of thought, all over the world are earnestly pointing the way to better conditions by means of mutual co-operation between the various parties.

### DRIED FRUITS.

#### 1925 Carry-over Sold.

Sales of Australian dried fruits in Great Britain recorded with the London agency of the Commonwealth Dried Fruits Control Board for the week ending July 15, were:—158 tons Sultanas, average price £70/16/3 a ton; 82 tons Currants, average price £45/15/9 a ton; and 5 tons Lexias, average price £40 a ton.

Total realisations to date are:—2,365 tons Sultanas, average price £72/6/5 a ton; 795 tons Currants, average price £47/6/9 a ton; and 51 tons Lexias, average price £41/9/1 a ton. The London agency has advised the parent board that the small carry-over of 1925 season's fruit has been entirely disposed of, and the London market is now working solely on the 1926 crop.



# Practical Experiences in Fruit Culture.

## Winter and Spring Work.

Pruning : Spraying : Cultivation  
Varieties : District Reports.

### Victoria.

NARRE WARREN.

**Pruning.**—Very often not enough attention is paid by growers to pruning. The fault, in some cases, is that they do not understand the theory of pruning. To those who would like to study it, I would recommend "Fruit Tree Pruning," by George Quinn, Department of Agriculture, S.A. Everything in it is simple to understand, and easy to put into practice. This book has been a great help to me.

In *Yates and Delicious*, pruning is a big factor. Taking the first mentioned variety, when young it is a strong grower and will not spur save at the top end of lateral, which soon makes the tree crowded. By cutting back to about four buds, and repeating each winter, you get your fruit close up to the main arm, let more light into your tree, make spraying easier and surer; also it makes it easier to thin out after fruit sets. As the tree gets older, spurs should be thinned down to one, and it will crop every year with manuring and cultivation.

*Delicious* is somewhat similar in some ways, but a stronger grower. Between the ages of five and eleven years (my oldest), trees in my orchard have grown from two feet to three feet in the year. *Delicious* also, will not spur unless laterals are cut back short. By doing this you get your tree into bearing earlier.

The most difficult, I find to prune, is *Rome Beauty*, as it often does not form buds at the base of the laterals at all, so when cutting back, be sure there is a bud. I find it better to let them run, then cut back to the knobs that form where fruit has been borne. You can always be sure of getting them to spring, often three buds from these knobs. *Rome Beauty* and *Jonathan* should be trained with less leaders than most other varieties, so as to leave room for plenty of lateral growth. I like from six to eight leaders in the above, in others, such as *Yates*, *Granny Smith*, *Delicious*, *Statesman*, *Rokewood*, *Five Crown*, 12 to 14 leaders, say, in a

tree 10 to 12 years old, planted 20 feet square.

**Spraying, Winter.**—This is the time of year one can best deal effectively with the different kinds of scale and woolly aphis that affect deciduous trees. The scale family does not trouble us here, but woolly aphis gets very bad with a mild winter, and if bad it is advisable to spray twice within a fortnight or three weeks, as the first spraying does not get all the eggs which are usually under the aphis itself.

I use prepared red oil, 1 in 25, and find it very effective; but care must be exercised to see it is well emulsified before diluting down to required strength. It is very important to have high pressure, 250 to 300 lbs., to blow off the woolly covering, thereby making a clean job.

**Spring.**—With the coming of spring, the fruitgrower's most important spraying season commences, if he is to have a crop free from black spot, or Apple scab as some call it. The spores of this fungus are carried through the winter months on decaying fruit and the fallen leaves, then with the warmth and moisture of spring they become active.

My treatment is as follows:—As the buds develop the pink stage, I cover with lime sulphur wash, 1 in 25. If rain comes just after, I repeat, especially if it is muggy weather. First lead when petals fall, 1 in 20; paste second, sulphur as the fruit is forming. It is important not to miss this with *Yates* and *Delicious*, the latter being the most susceptible variety to spot with me.

Some seasons I do not spray any more for black spot, but if the weather is close, it is advisable to watch the leaves and fruit daily, and on first signs cover again, 1 in 40.

Some growers are successful with the combination—lead and sulphur—but in my orchard results have not been satisfactory, so I spray separately.

**Cultivation.**—Autumn ploughing does not seem to be done so much as formerly, probably owing to want of time, growers being busily engaged at that period here harvesting the late Apples, *Romes*, *Yates* and

*Granny*. Further back on the hills, it is not a safe practice, owing to the washing down of soil by heavy rain.

I plough only once a year, in August, manuring with potash at the same time. The only exception some seasons is when I sow Peas for green manure. I use only the spring tooth and disc harrows for cultivating throughout spring and summer.

**Varieties.**—Our principal fruits are Apples and Pears, very few soft fruits.

Leading varieties:—Apples: *Jonathan* (main crop), *Rome Beauty*, *Yates* (lesser areas of *Crowns* now being mostly reworked on account of crinkle, with light crops), *Statesman*, *Gravenstein*, *Granny Smith*, *Delicious*, *King David*, *Rokewood*, and in some old orchards a scattering of the old-fashioned varieties.

Pears. — *Williams*, *Beurre Bosc*, *Winter Cole*, *Winter Nelis*, *Keiffer* (a good number being reworked), few *Josephine*, *Beurre Cap*.

The Secretary of the Narre Warren Cool Store, is preparing plans for the addition of more chambers to the present store.—R. E. Haysey, Narre Warren North.

### PORTLAND.

**Spraying.**—For winter spray we use red oil, 1 to 20. For spring spray, lime sulphur, 1 to 20 at the green stage, and 1 to 25 at the pink stage. Arsenate as directed, mixed with lime sulphur, 1 to 40 is used when most of the petals have fallen.

Next spring I intend spraying with strong *Bordeaux* before the green stage.

Having reached the calyx with the arsenate, our experience here shows that it is useless spraying again till much later than is usual elsewhere. We really have only two broods of codlin moth, the carry-over and one other. The development of the moth is so irregular that we like to keep a continuous light coating on the Apples by giving two, or may be three sprayings after the first.

**Principal Fruits** grown here are:—Apples, with a few Pears. Varieties: *Jonathans* predominate and do

exceedingly well, and are of very fine flavor; **Rome Beauties** are next in importance, and then **Munro's, Crowns** and **Sturmers**; **Delicious** are coming into favor for planting and grafting.

**General cultivation** practice during August:—I leave the ground unploughed in winter. Have tried both plans—(1) Plough as soon as weather and ground permit (generally the end of August); (2) leave in rough till late on in spring, then harrow and cross cultivate. We find that if ground is harrowed when ploughed, it acts like a culture bed for the black spot spores as soon as any warmth comes.

Many districts could not do this but we have ample rainfall during growing period, even this year our Apples are well grown.

**Pruning.**—In the past the Jonathan laterals were allowed to develop too much size, and as a consequence the leaders had neither the size nor length they would otherwise have had. Still there was so much greater bearing surface that the trees gave excellent results.

The practice now being adopted is to limit leaders to about ten, and by keeping laterals in bounds get stronger leaders.

**Development of District.**—There are some new orchards being planted, but not as many as the district warrants. A few of the growers have built a 15,000 cool store with direct expansion cooling, which has given excellent results. Loss was negligible, and then only in cases which should not really have gone into store, but were put in because the owner had space available.

Last export season united action was taken by the majority of growers, and 15,000 cases were sold to one buyer. The contents of the store, with the exception of a few thousand, were sold to one buyer in Sydney. The color of the Apples is good, and keeping quality and flavor particularly fine.

There are thousands of acres of land in the district suitable for orchards. It is only a matter of time when oversea boats will call for direct shipments. Three years ago a shipment was sent by a steamer which called for frozen meat.—W. J. Williamson, Portland.

## HASTINGS.

**Spraying.**—Winter:—Some use a strong mixture (1 in 10) of lime-sulphur, which acts in two capacities—to eradicate red spider—and as an early check to fungus diseases.

Where woolly aphis is in evidence, growers are busy with oil spray (1

in 25) of the prepared oil mixtures and some use crude oil with good effect, 1 gal. of crude oil to 15 gals. of water. To mix, boil in a gallon of water two pounds of any soap, and one pound of washing soda, then whilst boiling take off fire and stir in well the gallon of oil, and when thoroughly mixed add 15 gal. water. This mixture is found to smother the spider and woolly aphis with good effect.

### An Oil-Bordeaux Spray.

**Spring.**—The main spray is for spot and downy mildew. Bordeaux mixture is mostly used, 6 bluestone, 4 lime and 50 water (known to all growers).

I always use this mixture with one gallon of prepared oil added, and have not had black spot for many years. The oil keeps the bluestone from hardening the bark, smothers spiders and keeps the bordeaux mix-

and no doubt it is a great success. It is also a good check to downy mildew in the Romes.

Many use lime-sulphur in picking stage of spot, at a strength of 2 gallons to 50 of water, followed up fortnightly with weaker strengths, with good results—but so far bordeaux has proved itself the best.

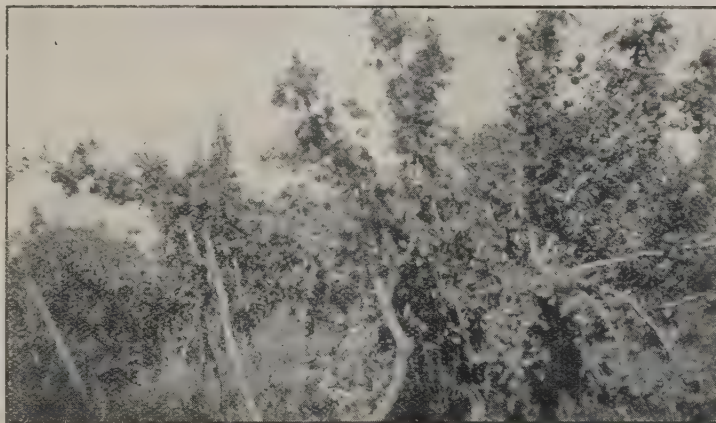
These sprays are applied with a fine nozzle and the trees drenched.

The **spring spraying for codlin moth** is usually commenced when the Apples are as big as Peas, and then followed up with the later spraying, about every three weeks, but in the Peninsula in wet years, codlin does little damage.

### Varieties

The varieties of fruit grown here include:—

**Apples**, mainly Jonathan, Rome Beauty, Five Crown, Alfriston, Graevenstein, Reinette, Statesman—with



Yates Apple Trees—Heavy Crops at Mr. Jas. Cowan's Orchard, Bacchus Marsh, Vic.

ture adhering longer, and also checks the unsettling of the Apple. This mixture is best applied in the picking stage; if petals are well out, it browns them, but does not seem to harm the fruit. I would not take a pump of bordeaux out now, without a gallon of oil in it (1 gal. to the 6-4-50).

For **Pears**—if the oil is used, two pounds of soap must be added, as the mixture sometimes unsettles the Pear leaves.

**To Mix.**—The gallon (of any prepared oil) is best made up to four gallons with water and added last, after the bordeaux is mixed. Then it is poured into the pump—but not through the strainer (this is important). The dirty strainer will sometimes break the oil up, but if poured in with strainer raised, there will be no failures. A good many of us use it every year. I was first to try it

Stewarts seedling, **Delicious**, **King Cole**, **Democrat** and **Red Rome** coming into favor.

**Pears.**—**Beurre de Capiaumont**, **Winter Cole**, **W.B.C.**, **Packhams**, **Beurre Anjou** and **Broom Parks**; in some localities **Josephine** and **Howells** do well.

**Plums**, mainly **Grand Duke**, **De Cayan**, **President**, **Magnum Bonum**. Many growers have grubbed their Plums out, poor prices and brown rot making them unprofitable. Japanese varieties are just going out of favor.

**Apricots** as a whole are not considered profitable and not many are being planted. **Peaches** the same.

### Pruning.

For August, apart from spraying, pruning is the only job that is practiced here.

This year has taught the district that growers must prune harder, all varieties becoming rather small.



In our district growers are beginning to find

#### organisation pays.

The packing sheds are kept busy and many growers now have all their fruit packed by the local packing sheds (all have "lightning" graders, a great success).

The Cool Stores Companies are considering the advisability of converting from suction gas to electric supply.

Apples are keeping well in all the stores to date.

Several growers have tractors, and are well satisfied.

In my place *Aphelinus Mali* (Woolly *Aphis* parasite) is doing great work.—F. Stockton, Hastings.

#### SHEPPARTON.

Owing to the heavy rains during the end of March and early April, there were big losses among the growers of Pullar's Cling Peaches. I lost about 15 tons, and other growers had big losses from the mature fruit falling before it could be picked. The crop on the trees was enormous and if all had been gathered would have been more than our local cannery could have handled in the period it was ready for delivery, as notwithstanding the big losses sustained by many growers, the Shepparton Cannery put up a record pack of high quality fruit, on which I am informed a good profit will be shown.

A packing shed for the processing of dried fruits is about to be opened by the Shepparton Orchard Products Ltd., at the Shepparton railway station, where they have installed the eight ton Brockhouse, Mildura, stemmer and grader I have had here since 1916. This has processed all district-grown fruit, which, in future will have to be treated at the registered shed of Shepparton Orchard Products Ltd.

Owing to the wet drying season, the quantity dried will be less than in past seasons, as a lot of the fruit has gone mouldy on the racks and is unfit for human consumption. One of the largest growers had recourse to dehydration to finish off the drying, with very fair results; but the color of the fruit is much darker than the sundried.

Pruning operations are now in full swing—though somewhat hampered by the continuous rains of last week. Since the break of the drought at the end of March, our rainfall has been much above the average—last year at this time we had a long spell of dry weather, with a succession of frosts.—C. J. Nash, Shepparton East.

## South Australia.

### NURIOOTPA.

#### Spraying Operations.

Curl leaf in Peaches is easily prevented by spraying with Bordeaux mixture at the rate of 10 lb. blue-stone, 10 lb. lime to 80 gals., when the buds are swelling.

If any green or black *aphis* is present the trees are sprayed with Black Leaf 40 (1 pint to 100 gals.).

For shot hole in *Apricots*, it is advisable to spray twice with Bordeaux, first, before the buds open, at the rate of 12 lb. each of lime and blue-stone, and again when the fruit has set, but still enclosed in the calyx.

Apples and Pears, I spray with Bordeaux (12, 12, 40), just when the flower buds are separating. In ordinary seasons, one application is usually effective in preventing black spot.

Dunn's Favorite appears to be quite proof against black spot under local conditions; although the trees are never sprayed with any fungicide, the fruit is always clean.

In preparing Bordeaux I use a small excess of lime over the usual formula.

The principal fruits grown here are:—Apples (chiefly Cleopatra, also Dunn's Rome Beauty, Jonathan).

Pears (chiefly Williams B.C., Glou Morceau, also W. Nelis, Bosc, etc.).

*Apricots* (Moorpark).

*Peaches* (Elberta, Salway, Red Italian Cling, Goodman's Eureka).

*Prunes* (D'Agen, Splendor, Robe de Sargent, Sugar).

*Plums* (Golden Drop, Jefferson, Giant, etc.).

#### Fruit Drying Experiments.

Some interesting experiments in the processing of dried fruit were carried out last summer by Mr. W. Dempster, a local orchardist, with the object of improving its appearance. The best results were obtained by a cold dip of potassium bi-sulphite, at the rate of 2 oz. per gal. This is sometimes used in the manufacture of wine as an antiseptic, and is perfectly harmless.

Apples and Pears treated by this method were of snow white color, and appeared to be far superior to those bleached in the ordinary manner. *Apricots* and *Peaches* were not quite so successful in comparison with the best samples of well sulphured and sun dried fruit. *Sultanas* and *Gordos* are not produced in this district, but it would be worth while comparing the effect of this new dip with that of carbonate of potash, which is now

extensively used in the processing of *Sultanas*.—A. B. Robin, Nuriootpa, S.A., 18/6/26.

### GUMERACHA, S.A.

#### Winter and Spring Spraying.—

The writer has done but little winter spraying; that which has been done has been in the nature of experimental work, and has been confined to lime sulphur at a strength of one in ten, using the prepared solution. It has been applied to Cleopatra Apple trees only; last winter was the first time I used it thus, and the object was to determine, if possible, whether a strong application in winter had any controlling effect on the development of *fusicladium*. The results so far are inconclusive, as owing to a comparatively dry spring this disease was less in evidence than usual. I am, however, of the opinion that a strong winter application of lime sulphur is beneficial, in that it is destructive to a considerable extent of many of the insect pests. Difficulty, however, is met with in applying in winter owing to the saturated state of the soil, which makes it difficult to get on the land.

**Spring Spraying:**—So far as regular orchard practice is concerned, this is confined to the application of lime sulphur for the fungoid diseases, and arsenate of lead for codlin moth. Some experimental tests were made regarding the comparative value of Bordeaux (which before the advent of lime and sulphur, was the only remedy used for control of fungus). After a good deal of experimenting, however, I am satisfied that the lime sulphur spray is equally effective, is much less trouble to mix, and is less severe on the working parts of the pump.

Principal fruits grown here are Apples, in the leading export varieties extensively, and in a lesser degree some of the early cooking varieties. Pears and Plums are also grown considerably for drying and preserves and jam purposes.

Orchard activities in August are confined to pruning, as at this time of the year the land is much too wet to allow of cultural operations being carried on; in fact, the less tramping there is upon its surface the better.

Regarding pruning, it is somewhat difficult to go into detail, as in its practice it is necessary to deal with each tree (to say nothing of each variety), as a separate problem. In general, however, it may be said that the objective is to secure and maintain a tree having the

**strength and vigor**

to produce and carry a good crop, so disposed to the influences of air and sunlight as to ensure the maximum of color combined with the rich luscious flavor peculiar to the variety which will make the consumer (be he producer or purchaser) return for more. In the attainment of this end the use of the pruning shears has a definite part to play.

Very little is being done in the way of extending the orchard areas of the district, growers generally being of the opinion that between "Arsenic Scares," shipping strikes, industrial troubles, and other "pests and diseases," the outlook for the fruitgrowing industry is just a little uncertain at present.

The local cold store is about filled, although a considerable proportion of the fruit is on the small side, consequent upon about seven months of the growing season having been rainless.—J. B. Randell, Gumeracha, S.A.

**WILLIAMSTOWN. S.A.**

This is a large fruitgrowing district, and most varieties of fruit are grown, the largest acreage being Apples, principally Cleopatra, Jonathan, Dunn's Seedling, Rome Beauty, King David, and most varieties for export. Plums, Peaches and Apricots are also largely grown, as well as Currant Grapes and Grapes for distilling purposes.

There are three distilleries at Lynndoch (on Angaston railway line), five miles away, and the wine Grapes are carted there. Our branch of the Agricultural Bureau meets every month, when valuable lectures and discussions take place. Demonstrations and addresses are also given by expert officers of the Department of Agriculture.

The season for this particular time of the year is exceptionally good. The wet month of May (7.94 inches), and the mild June (3.50 in.), with plenty of sunshine so far in July (16th), the early blossoming of the Almond, and the prominent movement in the buds of the Peaches, Apricots and early flowering Plums, are sure and certain indications of an early spring.

Some growers have already introduced their winter spray of bluestone for fungi, to their Peaches, Apricots and Japanese Plums. Being a hilly district, with usually a heavy rainfall, fungus diseases are very prevalent.

With a warm sun in July, growers will have to be watchful for Peach aphis, etc., with judicious spraying at the right time most of the fungus diseases can be controlled.

Pruning in the vineyards is in full swing; most of the Plums, Apricots and Prunes are finished, and towards the end of the month Peaches should also be finished, leaving only Apples and Pears to complete the pruning operations for the year.

Ploughing of orchards generally commences in the latter portion of August, on until October.

The prospects for the coming season are very favorable.—George Brown, Hon. Sec., Williamstown Branch, S.A. Agric. Bureau.

**New South Wales****Bowenfels, N.S.W.**

The climate here is similar to, say, Bathurst, or Goulburn, very cold in winter, summer very pleasant. I have only seven acres in my orchard, about 800 trees, principally Apples, with Pears, Quinces and Cherries, and a few Plums. We have a few large orchards within a radius of 10 to 12 miles; they are nearly all Apples and Pears. There is a large orchard, run by the Lithgow Co-operative Company, which also runs a large store, butchery and bakery.

Last year, as you know, we got hit very heavily with the moth. I sprayed with the winter spray, red oil, and three or four times for the moth. I should like to know how and what I can use with lime sulphur for winter, and the lead for the black spot. I have till this season used a 40 gallon spray pump, but I will use a power spray this year, which should give better results.—Thos. Sutton, Bowenfels, N.S.W.

**Western Australia****MT. BARKER, W.A.**

The principal sprays used are:—

- (a) Oil for red spider and aphis, one gallon to ten, for winter spraying;
- (b) lime sulphur and sulphate of iron, plus blackleaf 40 for powdery mildew and aphis (one gallon lime sulphur, three lbs, sulphate of iron, 40 gallons of water, one pint B.L. 40 to 100 gallons), early winter spraying;
- (c) lime sulphur 1 to 10-12 plus one pint B.L. 40 to 100 gallons, late winter spray for fungoids and aphis.

These sprays are for Apples.

- (d) French Bordeaux (prepared) for black spot in Pears, late spring; lime sulphur 1 in 40, late petal spray for black spot in Pears.

Calcium caseinate is used in all sprays that require a spreader, with very favorable results.

The chief fruits grown are:—

Apples: Jonathan, Dunns and Cleo-

patra for export; Granny Smith, Yates, Rokewoods for late. Pears: B. Bosc, Winter Nelis, Josephine, Doyenne du Comice and Glou Morceau; a few of many other varieties in both Apples and Pears.

The main operations at this time are pruning, and a certain amount of spraying.—J. McN. Martin, Mount Barker Estate, Mt. Barker, W.A.

**BRIDGETOWN, W.A.**

The principal pests are Red Spider and San Jose Scale. I am thankful to say I have none of the latter, but the former is fairly bad in most orchards in the district.

Woolly aphis has been practically cleared out by the parasite, *Aphe-linus mali*, and I shall be very anxious to see if, after spraying for red spider with oil, aphis again appears in any quantity, and whether there will be enough parasite alive to combat it.

In this district we grow mostly Apples and Pears, and a small quantity of stone fruit; but as there have been a few cases of fruit-fly, growers would be well advised to grub out all stone fruit.

The prices in London owing to the strike will hit orchardists badly, but there is still fresh planting going on, and we can undoubtedly grow Apples here in quality and quantity per acre equal to anywhere.—Owen Sparkes, Bridgetown, W.A.

**READY-MADE BORDEAUX MIXTURE.**

Lawford's Fruit Exchange are advertising Schloesing's Bouillie in this issue.

While this ready-made form of Bordeaux Mixture is already well known in the viticultural industry, it has not been very extensively used on the mainland as yet, although Tasmania and New Zealand have used it for some years with excellent results. Scores of testimonials are available as to its efficacy and convenience. The price, too, is stated to be in its favor, when time and trouble involved in making ordinary Bordeaux is considered. Another feature is that it is ready to use at a moment's notice.

**COOPER'S ARSENATE OF LEAD PASTE.**

Messrs. Wm. Cooper and Nephews (Australia) Ltd., manufacture the finest possible grade for orchardists who require their arsenate of lead in paste form. Prices:—100 lb. kegs, 9d. per lb.; 50 lb. kegs, 10d. per lb.; 25 lb. kegs, 11d. per lb. Victorian Agents: NEWELL & CO. PTY. LTD., 189 King Street, Melbourne.



## Western Australia

### CULTURAL HINTS.

#### Operations for August.

Winter pruning should be finished this month, although some of the later blooming kinds of Apple and Pear trees can be pruned as late as the second week in September. It is very inadvisable, however, to run winter pruning on into September, not that the late blooming varieties would suffer from the operation, but September is the commencement of spring, and spring brings its own duties which should not be hindered in accomplishment by a carry-over of winter work.

Planting deciduous (not Citrus) trees should also be finished this month.

Scions for grafting should be cut from the trees this month and buried in soil in a cool place, so that the buds will remain dormant until after grafting is done in September.

The second spraying for San Jose Scale should be applied before the end of this month to all trees on which the buds are forward. Late blooming kinds can be sprayed in September with winter strength solutions.

Citrus trees should be carefully watched for aphids, and black leaf 40 brought into use if the insects are plentiful.

Fruit fly traps should be in continual use and frequently cleaned out and replenished.—G. W. Wickens, Officer-in-charge Fruit Industry.

### RESIDUAL ARSENIC ON APPLES.

ALTHOUGH WESTERN AUSTRALIA is comparatively free from Codlin Moth, there was a well-defined outbreak during the past season, and severe arsenical sprayings were undertaken to eradicate the pest. In ordinary years arsenical sprays are used for the control of beetles, looper caterpillars, and other insect pests; and in view of the scare in England regarding arsenic on Apples, the Director of Agriculture (Mr. G. L. Sutton) arranged for a series of analyses to be made. The "Journal of Agriculture" gives the results. Apples from three different orchards, of different varieties, and sprayed with solutions of slightly different composition, were analysed, and it was found that, although the

season was very dry, the residual amounts of arsenic found on the fruit ranged from a mere trace to one-eighth hundredth part of a grain per lb. The limit set by the British Ministry of Health, which fruit would be condemned, was one-hundredth part of a grain of arsenic per lb. The latest spraying in these cases was during the second week in November.

With a spray of 8 lbs. arsenate of lead to 100 gals. water, no flour being used to act as a "spreader," the residual arsenic did not exceed one-three thousand six hundredth part of a grain per lb. Where 6 oz. of flour were used and 12½ lbs. arsenate per 100 gallons, this proportion was slightly increased in respect of some varieties, while where 5 lb. of flour per 100 gallons were used, the proportion rose to one-eighth hundredth part of a grain per lb.

These sprays were considered to contain an excessive amount of arsenate of lead, the proportion recommended for codlin moth being 5 lbs. per 100 gallons water.

A further test was made in an orchard which had been quarantined for codlin moth eradication, and where unusually severe sprayings were adopted. The last of five sprayings took place the third week in December (an unusually late date and an unusual number of treatments); the residue of arsenic in one instance rose to a one hundred and tenth part of a grain per lb. These Apples were not exported, but could have been without risk, the amount of arsenic found, both on unwiped and wiped Apples, being considerably less than the amount permitted by the Imperial authorities.

### FLOODS IN WESTERN AUSTRALIA.

#### Orchards and Vineyards Inundated.

Following on excessively heavy rains during the past three months, the southern portion of Western Australia was visited by severe storms during the third week in July. All the rivers were in flood, and large parts of South Perth and many country towns were under water.

The chief damage appears to have been to property, particularly to vineyards and orchards of the Upper Swan Valley and in the flats of Guildford. Thousands of acres of land at

West Guildford, South Guildford, Caversham, and Upper Swan were inundated, with few indications to show where fruit trees and vines stood. Large numbers of stock were drowned in that area. Nearer Perth the Swan River, which usually runs between banks about 200 yards wide, became four times its usual width.

The storm centre later reached Victoria, a tornado causing immense destruction in the Geelong area, and damage being reported from other districts.

### ORANGES ON THE MURCHISON, W.A.

A case of Oranges grown by Mr. Fred. Swinton, at "The Gap," near Nannine, W.A., was recently forwarded through the Secretary of the Meekatharra Road Board to the Chief Secretary (Mr. J. M. Drew), said the "Western Mail," on July 1. The Oranges were sent to demonstrate what fine fruit could be grown in the northern areas under very ordinary conditions. The smallest of the fruit is exceptionally large, and one which was sampled proved to be of good flavor, with an absence of puffiness. When the case was opened, the first Orange taken out from the top corner measured 14 inches in circumference, and weighed 1 lb. 6 oz.

Nannine is about 600 miles north of Perth, and 300 miles inland. The fruit was displayed in the exhibition hall of the Council of Industrial Development.

### ORANGE RUST MITE.

Writing in the "Journal of Agriculture," Mr. L. J. Newman, F.E.S., Economic Entomologist, Western Australia, referred to the first appearance in one of the Citrus districts of *Phyllocoptes oleivorus*, commonly known as "Orange Rust Mite," or "Maori." These mites are plant feeders, and attack the skin of Citrus fruits depreciating the value.

The pest is not yet widespread, and is readily destroyed by the use of ordinary contact sprays. The Department recommends the following spray:—Atomic sulphur 1 lb., water 8 gallons, sprayed thoroughly over leaves and fruits. The addition of Sunlight soap at a strength of 3 lbs. to every 80 gallons of mixture gives a good filming effect, and is recommended.

### FRUIT TREES FOR SALE.

The N.S.W. Water Conservation and Irrigation Commission is offering for sale supplies of Peach, Fig and Almond trees.

**CITRUS FRUIT GRADING.****Decision at Conference of Ministers of Agriculture.****Citrus Insurance: Sale of Immature Fruit Prohibited.**

At the recent conference of Ministers for Agriculture in Brisbane, the following grade standards for Citrus fruits were adopted:—

"Oranges, Mandarins, Lemons and Grape Fruits offered for sale shall not be dry nor immature, but normal in shape and appearance common to the variety, sound, of even color, and be graded into either of the following grades:—

"Standard"—Oranges, Mandarins, Lemons, and Grape Fruits described as "Standard" shall be free from disease, of one size, one variety, and of good weight for the size. Skin blemishes of a superficial character such as caused by rubbing, insect and fungus pests, hail marks and oil stains, shall not cover more than five per cent. of the total area of the surface of any fruit.

"Plain"—Oranges, Mandarins, Lemons and Grape Fruits described as "Plain" shall be free from disease, of one size and one variety. Skin blemishes of a superficial character such as caused by rubbing, insect and fungus pests, hail marks and oil stains, shall not cover more than 25 per cent. of the total area of the surface of any fruit.

Fruits containing more than 1.61 per cent. by weight of acids or less than 15 per cent. by weight of juice shall be deemed immature and not of good weight. The fruits shall be packed as prescribed and the number of fruits contained in any case shall be legibly branded thereon in figures of prescribed sizes.

**Citrus Insurance and Export**

The continuance of the Citrus insurance fund was recommended, details being given in our last issue.

It was decided that all States should conduct experiments to determine the best methods of preventing decay in Citrus fruits. Compulsory export of Citrus was not at present recommended.

**Sale of Immature Citrus Fruits Prohibited.**

The sale of immature and dry Oranges on the local markets, and the export of immature and dry Oranges are to be prohibited.

The term "immature" is taken to mean that 10 cubic centimetres of the

hand-pressed juice of an Orange shall require not more than 23 cubic centimetres of N/10 soda to neutralise the acid, and with respect to dry Oranges that the weight of the hand-pressed juice of the fruit shall not be less than 15 per cent. of the total weight of the Orange.

An inspector with very little experience would be able to carry out an acidity test in the field without difficulty.

**WORKERS' COMPENSATION ACT IN N.S.W.****A Drastic Measure.**

The amendments to the Workers' Compensation Act of N.S.W. came into force in that State on July 1. The regulations under this Act are so drastic that both primary and secondary industries are alarmed. While designed to benefit employees, the Act has, in fact, resulted in



This is the first time the Fruit Experts of the six States have met together. Standing (left to right): W. J. Allen, N.S.W.; A. H. Benson, Q.; Sitting: Geo. W. Wickens, W.A.; Geo. Quinn, S.A.; J. M. Ward, Vic.; P. H. Thomas, Tas. Photo. taken during the Conference of Ministers of Agriculture at Brisbane in June last.

**OBITUARY.**

The death of Mr. N. D. Wivel took place on July 3, at Sidmouth, on the Tamar, Northern Tasmania. For a period of four years deceased acted for Geo. Monro Ltd., of Covent Garden, London, and was very popular with the Northerners.

A pioneer orchardist of the Orange district, Mr. Wm. E. Eyles, has died at the age of 85, following a long illness. Mr. Eyles was one of the first to propagate leading varieties of Apples, including Granny Smiths, in the nursery he established more than 50 years ago. Some of the original trees are still bearing. His orchard was credited with having the best trees of Grannies in Australia.

greatly increasing unemployment.

Under the new regulations practically no rural employer is exempt from liability. A farmer has to insure his own family if they do work about the farm. A butter factory is liable for the contractor supplying it with firewood. There is no limit to weekly compensation; if a man sustained injuries which incapacitated him for life, compensation might run into an enormous amount. Medical benefits up to £50 are payable by the farmer. Severe fines may be imposed for failure to insure. The regulations in regard to accommodation for employees, under the new Rural Workers' Accommodation Act, impose a further burden which few employers will be in a position to meet.



## Fertilisers for Orchard and Vineyard

Nitrogen : Phosphoric Acid : Potash.

The Importance of Lime and Humus.

The following paper was read by Mr. C. Robin, at the Light's Pass Branch of the South Australian Agriculture Bureau:—

"In writing this paper, I have tried to be guided as far as possible by local conditions, and I would like to point out that, as conditions vary so much even within the district, that no hard and fast rules can be laid down, but that every member should be guided by his own experience, and should not be afraid to experiment.

"A fertiliser is a substance that contains an essential plant food, and is used when the soil in question shows a deficiency in the same.

"In order to form an accurate idea of the use and

### action of fertilisers

in the orchard and vineyard, it is necessary to understand the substances on which plants feed, and the manner in which they feed, so that we may gain some idea where a plant food is missing, of what to apply, and how to apply it.

"All plants are composed of water, organic matter and mineral ash. Organic matter is made up of water, carbon, and nitrogen, of which carbon is gained from the air in the form of carbon di-oxide.

"Nitrogen is only of use to the plant when in solution in the soil moisture, in which form it is easily washed out of the soil, and as trees and vines need a good deal of nitrogen, it is often necessary to apply nitrogen in some form or another as a fertiliser.

"Mineral ash is composed of a number of minerals, all of which, though only needed in small quantities, are absolutely necessary for the growth of the plant and the formation of fruit. The majority of these minerals are present in sufficient quantities in most soils, and we need only concern ourselves with phosphorus, of which substance the majority of the soils in the State, including this district, are deficient, and potash, which is often lacking in the lighter, sandier soils.

"Summing up, we find that the substances most commonly needed to be applied as plant foods are **nitrogen, potash, and phosphorus**. These plant foods are only available to plants in the form of a weak solution of soil moisture, in which condition it is

termed available plant food, and the aim is to apply a fertiliser that will readily become available for the use of these plants.

"Generally speaking, fertilisers may be divided into organic manures, such as farmyard manure, green manures, etc., and artificial fertilisers. Taking **the organic manures**,

first, we have farmyard manure, which, until a comparatively few years ago was the only manure used at all. This is a good, all-round manure, being rich in the three essential plant foods, nitrogen, potash, and phosphorus.

"The manure should be well rotted before use, and should be evenly spread over the ground in winter, to be ploughed in as soon as possible. Between 12 and 20 tons per acre is an adequate dressing. Care should be taken when obtaining farmyard manure to see that no noxious or other undesirable weeds are imported into the garden.

"The value of green manures of recent years is gradually becoming recognised in this district. The best type of plant for use as

### a green manure

is that known as leguminous, comprising Peas, Beans, Clover, etc., which have the power, by means of bacteria working in nodules on their roots, of fixing the nitrogen from the air and storing it in the nodules on the roots of the plant; thus a soil which has had a leguminous crop ploughed in will be much richer in nitrogen than it was originally.

"If Peas are used, they can be drilled in late autumn or early winter, with the superphosphate, and should be ploughed under during September, or early in October, while they are still succulent. A disc cultivator is very useful in running over the crop to facilitate ploughing, or else drag-chains can be used on the plough.

"Various types of legumes, of which Melilotus seems the most suitable for this district, can also be used as a green manure. These seed early, and become permanent on the soil.

"Both farmyard manure and green manure, when in the soil, turn into the substance known as humus, at which stage they are being attacked by soil bacteria, and nitrogen is converted into soluble nitrates, available for plant use.

Humus, besides enriching the soil, improves the texture of it; it has a great water-holding capacity; it tends to make heavy soils more open and better drained, whilst it has a binding and firming effect on light soils. Artificial fertilisers are divided into three types, according to the plant food which they are intended to supply.

### Nitrogenous Fertilisers.

"The general effect of nitrogen on fruit trees and vines is to stimulate their growth. If it is present to excess in a soil, the result will be a rank growth, and coarse, sappy fruit. However, used with common sense, growers may obtain a great deal of benefit by the use of this valuable fertiliser.

"Numerous nitrogenous manures are on the market, but for most soils sulphate of ammonia is to be preferred, being cheaper per unit of nitrogen. If, however, the soil is

### deficient in lime,

one of the nitrates, such as nitrate of soda or nitrate of lime should be substituted, because sulphate of ammonia is only adding acidity to the soil.

"Nitrogenous fertilisers should be applied in the spring soon after the fruit crop is set, because they have a tendency to injure the setting if applied earlier by causing the sap to flow too freely at this critical period.

If applied in the winter, it might be washed out of the soil by the time that it is wanted in the growing season. Also, by waiting till the crop has set, the amount of manure necessary can be gauged. The amount applied per acre varies with the size, age, and condition of the trees, as well as the crop they are carrying.

"Nitrogenous fertilisers are also very useful to apply as a stimulant at any time during the summer, or when the tree is carrying too heavy a crop. If applied just before a rain, so much the better.

### Phosphatic Manures.

"Phosphorus is a substance which is only slightly soluble in soil moisture, so that, although it may be found in the soil in fairly large quantities, only a small proportion becomes available each year for plant food, and so an addition of some soluble phosphate becomes necessary.

"With fruit trees and vines, the general effect of phosphates is to increase the crop, and to influence the ripening of fruit and wood. In our orchard we have found heavy dressings of superphosphate tend to check the habit of fruit trees to crop only on alternate years; and the result has been more regular crops.

Phosphatic manures may be divided into two classes, the acid-soluble, such as bonedust, rock phosphate, etc., and the water-soluble, such as superphosphate, Thomas' phosphate, etc.

"Of the acid-soluble type, bonedust is probably the best known and perhaps the most useful. It is a very useful manure in very wet patches, such as those soils in this district subject to flood, where a more soluble manure would be washed out, and it is also a very good manure to place in the holes when planting young trees.

"Bonedust, it must be remembered, will last for years in the soil, because only a small part of it becomes available each year. Bonedust can be applied at the rate of three to five cwt. per acre.

"Of the water-soluble type of phosphate, which becomes available to the plant the year in which it is applied, superphosphate stands alone for most soils. This is generally obtained from ground rock phosphate, treated with sulphuric acid to render it soluble.

"When in the soil, superphosphate reverts quickly, in which form it becomes slowly available as a plant food. Plants exude from their roots a slightly acid fluid, which can attack this reverted phosphate to enable it to be assimilated as a plant food. If the soil is acid it is better to use Thomas' phosphate. Superphosphate is the most widely used of all fertilisers in this State, because practically the whole country is deficient in phosphorus, and superphosphate is quick in its action, and gives good return for the money spent on it.

"Superphosphate should be applied in the winter, so that it will be ready for assimilation by the roots, when the growing season commences. It is best drilled in before ploughing to ensure that it will get down to the roots when ploughed under, and not draw the roots up after it to the surface. The amount applied per acre varies according to the condition of the soil and trees or vines; up to three cwt. to four cwt. can be used for heavy-cropping trees.

#### Potash.

"Generally speaking, in this district only the poorer, sandier types of soils are deficient in potassium. Where potash is applied to these soils, however, a marked improvement can be noticed. The general effect of potash on fruit trees and vines is to improve the flavor and quality of the fruit, besides having a beneficial effect on the healthy development of fruit buds. Potash may be obtained in several forms, of which sulphate of potash seems to give the

best results in the vineyard and orchard. The fertiliser can be mixed with the superphosphate to be drilled or broadcasted at the rate of one cwt. per acre.

#### Burnt Prunings.

"The practice of using a burner in disposing of the prunings from trees and vines is a good one, because the ashes which fall are largely composed of potash and are a valuable addition to the soil. Pressed skins from the distillery also make a good manure. They are of about the same composition as farmyard manure, and have the same effect.

"Lime, although not actually a fertiliser, can be mentioned briefly, because if the soil is deficient in it, not only will the soil have a tendency

to become acid, but many of the plant foods remain insoluble, and the plants cannot make use of them. A fair application to sour soils would be 12 cwt. fresh, equal to about 16 cwt. slaked lime.

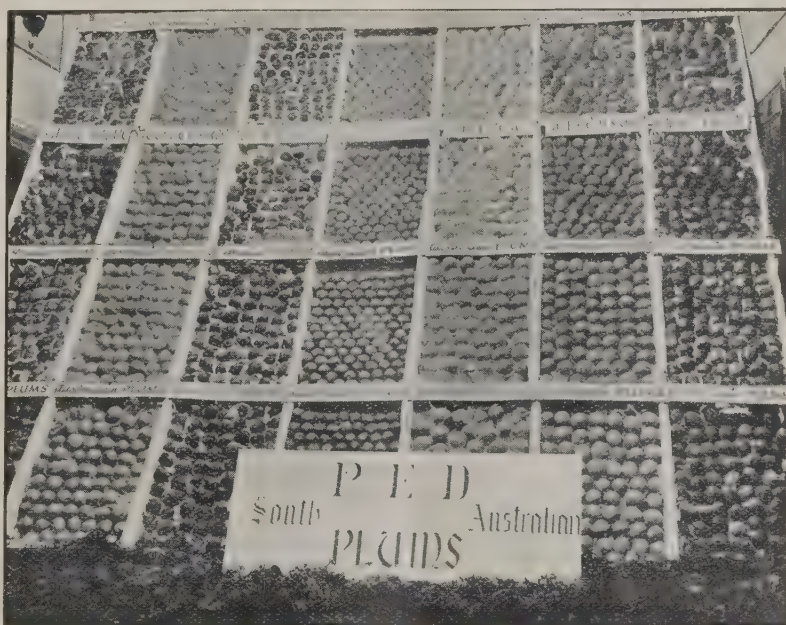
"Gypsum comes under the same heading as lime. It is not in itself a fertiliser, but it helps to set free other plant foods, chiefly potassium. It has not the value of lime in sweetening sour soils.

"Mixed manures that can be bought ready mixed are not to be advised, because very likely you are paying for something you do not want, and in any case they generally prove more expensive than if you buy the ingre-

#### PLANT QUARANTINE STATION.

"Will Not be Lost Sight of," says Dr. Cumpston.

For several years Australian horticulturists have been seeking the establishment of a Plant Quarantine Station, through which new and valuable varieties of plants and fruits could be imported in quarantine for distribution when proved clean, and



Window Display of South Australian Plums exhibited by Messrs. Gerald Da Costa, Floral Hall, Covent Garden, London.

a resolution to this effect carried at the recent Fruitgrowers' Convention held at Portland, was forwarded to the Federal Director of Quarantine.

We understand that the money required was provided for in the draft estimates. Apparently there is some co-ordination needed between the Federal Department of Quarantine and the State Departments of Agriculture, but the problems that exist should soon be solved. All interested will be encouraged to know that the matter is receiving close attention from Dr. Cumpston, the Federal Director-General of Health, who states that it will not be lost sight of.



## Tasmania.

Interesting News and Comments : District Reports : New Raspberry Varieties.

By Our Correspondent.

THE HARVESTING of the Apple crop is now completed. Fruit-growers have made full use of the cold storage space available, and the various centres report all chambers being filled to their utmost capacity. The varieties cold-stored principally comprise:—Tasma (Democrat), French Crab, Sturmer, Crofton and Delicious, the bulk of which will be held for October and November markets. A large quantity of fruit is also being held under ordinary storage in the individual Apple sheds. This is now being drawn upon for interstate markets, the weekly shipments totalling approximately 30,000 bushels. The following are the export figures to date:—Interstate, 758,274 cases; overseas, 2,077,000 cases.

### Overseas Shipments.

Overseas shippers will have to face very serious losses this season. The

to interstate markets. If this occurs to any extent, unless better distribution is better organised, the position of the interstate shipper and the fruitgrower who supplies the home markets, will be just as unenviable.

### Port Huon Wharf.

Each year the facilities provided for forwarding fruit direct to interstate markets from Huon ports are being more fully availed of by growers, and shipments from Port Huon and Cygnet are largely increasing.

At these centres wharfage accommodation has been provided which will berth large interstate traders, such as the s.s. "Riverina." A request is now being made for further extensions to the Port Huon wharf. This is the centre of one of our biggest producing districts, from which approximately 600,000 bushels of fruit are exported during the season. A move has now been launched to obtain facilities that will enable the "overseas" vessels to visit the port. Every case of fruit that can be shipped direct in this way represents a saving of at least 3½d. per case to the grower in freight, and also a considerable reduction in the handling and consequent bruising.

### Apple Packing Competition.

At the recent Fruit Show at Geeveston, an interesting Apple packing competition was held during the evening.

The entrants comprised chiefly old pupils who had received training at the packing classes conducted by the Fruit Division of the Department of Agriculture. After a keen contest, Mr. J. Ryan, of Geeveston, was awarded the premier honors, the time occupied in packing the "two cases of 2½ in. Sturmers," being five minutes 22 seconds. Mr. E. Jarrett, of Geeveston was second in five minutes 34 seconds.

### Reduction in Freights.

The announcement by the overseas Shipping Companies that a reduction of 6d. per case is being made in Apple freights, will be a crumb of comfort to shippers for next season. On present experiences this means that the grower will have 6d. less risk to face when exporting his fruit overseas; but until better organisation is effected in the distribution and marketing of the fruit it is doubtful if the full benefit of any decreased costs will return to his pocket.

The reduction represents an amount of approximately £50,000 when based upon this season's export figures. In view of the losses experienced this season, a request is being made to the Commonwealth and Conference lines that the reduction be made retrospective from February, 1926.

### Orchard Supervision.

One of the first moves that has been made by the new Director of Agriculture (Mr. F. E. Ward), is toward centralising the supervision and control of the fruit industry in the Department of Agriculture.

The State Fruit Expert (Mr. P. H. Thomas) has long recommended this action, and Dr. Cameron, in his recent report to the State Government upon the re-organisation of the Agricultural Department, strongly emphasised the necessity of such centralisation.

Under the present system, each municipality is supposed to carry out inspectorial and supervisory work through the local inspectors. There are over 40 municipal districts in Tasmania with nearly 40 different ideas of how this shall be performed. Under the proposed re-organisation

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prices now being cabled for the better class varieties show that average sales will hardly cover the costs of packing and export charges, and that the grower will receive nothing for producing the fruit.

The Federal Government has been approached through the Australian Fruit Council to consider a request for assistance in the shape of a guarantee of the costs of production, to the grower, on similar lines to that operative in New Zealand.

It is difficult at this stage to appreciate the actual results which ensue through the experiences of this season. Many growers are of the opinion that a large proportion of the overseas trade next year will be diverted

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the State will be divided into seven fruit districts, and competent trained men with technical experience will maintain a supervision over the control of orchard pests, carry out demonstration work and generally assist the orchardist in matters of culture, spraying, packing, etc.

### New Raspberry Varieties.

Arrangements have been made for the introduction of two new Raspberry varieties into Tasmania this season.

The kinds selected are Lloyd George and Mitchell, and will be forwarded from Perthshire, Scotland, in exchange for a quantity of the very productive "Red Antwerp" strain

grown in Tasmania. The plantations from which the Tasmanian canes were obtained are in the Sandfly district, and last season averaged four tons of fruit per acre.

#### Export Control.

Owing to the generally unsatisfactory conditions ruling in the marketing of overseas Apple and Pear shipments, fruitgrowers are again considering the adoption of a control scheme for marketing their fruit, on similar lines to those operative for butter, meat and dried fruit. There is no doubt that any measure brought forward will receive far more consideration than in previous years, as the majority of growers are so disgusted with the experiences of this season that they will welcome any change from the existing order.

#### TASMANIAN STATE FRUIT ADVISORY BOARD.

A MEETING of this Board was held on July 6. There were present Messrs. Neil Campbell, M.H.A. (Chairman), J. P. Piggott, M.H.A.; W. H. Calvert, M.L.C.; A. Davies, J. H. Astell, F. Cole, E. H. Thompson (Jones and Co.), A. E. Bull (Deputy for A. E. Webb), B. J. Pearsall, V. J. Skinner and Secretary P. H. Thomas.

#### Overseas Exports, 1926.

The Chairman detailed the incidents leading up to the action of the Board, re overseas markets.

Resolutions were received from various Fruitgrowers' Associations throughout the State endorsing the representations of the Board in this respect.

Mr. Campbell informed members of the action taken by the delegation which visited Melbourne to interview the Minister of Markets and Migration, and put the case for the Tasmanian industry. This action was approved.

The Board then went into committee and considered a number of schemes which were submitted for meeting the position and obtaining adequate assistance to growers who had exported fruit on consignment to the United Kingdom, and who would suffer serious losses by reason of the dislocations due to industrial disturbances. It was decided to request the Federal Government to grant assistance to fruitgrowers exporting consignments overseas during the 1926 season, which will guarantee to each an amount equivalent to the costs of production, packing and export, viz., 12/- per case for their total consignments.

The Chairman, Messrs. Davies and

Piggott, together with representatives from the Government and Chamber of Commerce, were appointed a deputation to wait on the Minister for Markets and Migration regarding the matter.

#### Director of Agriculture.

The Minister of Agriculture introduced the newly appointed Director of Agriculture (Mr. F. E. Ward), who

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Telephone: Avenue 8804.  
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3, 4 and 5, The Arcade, Borough Market, London, S.E.1.  
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13 & 17 Victoria Street, Liverpool.  
Telephone: Central 888.  
Telegrams: "Geracost, Liverpool."  
(Facing Commercial Sale Rooms.)  
Deansgate, Manchester.  
Telephone: Central 7156.  
Telegrams: "Geracost, Manchester."  
17, Humber Street, Hull.  
Telephone: Central 4041 Y.  
Telegrams: "Geracost, Hull."  
Southampton Docks, (Facing No. 45 Shed).  
Telephone: Southampton 2610.  
Telegrams: "Geracost, Southampton."  
Eclipse Yard, Westgate, Mansfield.  
Telephone: Mansfield 440.  
Telegrams: "Geracost, Mansfield."

thanked members for their good wishes and assistance towards furthering the interests of industry.

#### Brown Heart in Apple Cargoes.

It was decided to obtain legal advice re a report in the press stating that a portion of the cargo of the s.s.

"Port Adelaide" was affected with brown heart.

#### Annual Fruit Conferences.

It was unanimously agreed that the Conferences be held as follows:—Hobart, August 11; Launceston, August 12.

#### Annual Report.

The annual report and balance sheet were adopted subject to audit.

#### Interstate Freights.

It was decided to ask the Interstate Shipping Companies for a reduction in freights on fruit consigned to Mainland markets.

#### Overseas Freights on Fresh Fruit.

It was decided to ask the Overseas Refrigerated Tonnage Committee that a reduction in freights upon Apples and Pears shipped overseas be granted for the 1927 season.

Tasmanian growers express regret at the delay of the Federal Customs Department in gazetting the grades decided upon at the recent meeting of the Australian Fruit Council.

The system of Agricultural Bureaux, so successful in South Australia and New South Wales, is recommended for adoption in Tasmania.

#### CORKSCREW FENCING POSTS.

A steel fence that will withstand the destructive proclivities of fire and white ants, as well as of all classes of livestock, would prove a boon to the man on the land. A new type of spiral steel post has been evolved which is said to eliminate many of the defects of its predecessors. Tests made on the Sydney Show Ground during February, showed the fence to have remarkable strength and resilience, the posts giving three or four feet under great stress, and immediately they are released, springing back to their original position. The posts were sunk 15 inches in pure sand, four feet being above ground; yet every effort to displace them or to knock the fence out of line failed.

The posts weigh just under one pound to the foot, and are sharpened to facilitate driving. No post-holes need be dug, and the posts are drilled according to requirements. Ordinary strainer posts are used about 150 feet or more apart, and it is claimed that the erection of such a fence means considerable saving in labor and cost, as well as time. The fence is said to be practically indistructible, the posts being dipped in a special coal-tar preparation to prevent rust. The Commonwealth Wool and Produce Co. Ltd., give further particulars in their advertisement on page 364 of this issue.



## A Grower's Dusting Experience.

Patience and Persistence Rewarded.

(By C. L. Burkholder, Purdue University, U.S.A.)

**M**ANY commercial growers are watching and reading all they can about the use of dust in place of liquid sprays in the yearly battle against orchard insects and diseases. Along this line, the experiences of D. B. Johnson, of Mooresville, Ind., U.S.A., are both interesting and instructive. Mr. Johnson has been using a duster for at least a portion of his orchard each season for a number of years. At first the dust was applied to Apples in accordance with the liquid spray schedule. Dust applied in this manner, however, did not give satisfaction, and Mr. Johnson tried both sulphur and copper dusts on this schedule.

In the spring of 1924 Mr. Johnson decided to give the dust one more trial, but he made up his mind to make an application every week, using a sulphur dust. This every week programme was strictly adhered to until August 1. Every Monday morning a weather survey was made at daybreak. If the wind was absolutely still, the duster was pulled into the orchard. If there was the least wind stirring, it meant another two hours' snooze and another weather survey Tuesday morning. In a few instances the dusting was done at night with the aid of auto headlights and a storage battery, which was rented at 1/- per night.

About one pound of dust was used per tree in each weekly application. It was applied from one side of the row only. The following week the dust was put on from the opposite direction. Trees were large and in some cases pretty high.

### Cleanest Crop for Years.

In the summer and autumn of 1924, Mr. Johnson harvested the cleanest crop of Apples he had raised for years, as far as scab, curculio and codlin moth were concerned. Apple blotch on some varieties was not controlled satisfactorily. Mr. Johnson says, "I would recommend liquid Bordeaux sprays 10 days, four weeks and six weeks after the petal fall for varieties which are known to be susceptible to blotch." The only Apple scab of any consequence was in the tips of a few of the tallest trees, especially White Pippin, which is very susceptible to this disease.

Weather conditions were very favorable to the development of scab in the spring of 1924. While no check trees were left, the tips of the tall

trees which the dust failed to reach were a good indication at least of what might have been expected.

### Dust Successful in Peach Orchard.

In 1923 a Peach dusting schedule, applied the same as for liquid sprays, on 30 acres of Peaches in the Johnson-Hobbs orchards resulted in an exceptionally clean crop of Peaches. The season was not a favorable one for the development of scab and brown rot, but Mr. Johnson feels that it will prove to be a much better way to handle summer disease and insect control in the Peach orchard than the former methods of liquid spraying.

### "Much Yet to be Learned."

There is much that can be said and remains to be learned about dusting. Evidently, however, the size and topography of the orchard, as well as the important diseases and insect enemies of each section, all have a bearing on the practicability of dusting as a substitute or supplement to liquid spraying.

## AEROPLANE DUSTING OF ORCHARDS.

The "American Fruitgrower Magazine" for February, publishes the accompanying illustration and describes an experiment at Mitchell, Indiana, where an aeroplane was used for dusting an Apple orchard. The experiment was conducted by the Morse Agricultural Service of New York, on July 31, 1925, when the Indiana Horticultural Society held its summer meeting, this being the first demonstration of such a method of dusting.

The equipment, the invention of Mr. Morse, consists of a large metal hopper, which fits into the fuselage of the aeroplane, a small windmill-driven air pump, and a distributing tube. The pilot releases the dust into the tube by means of a lever, and it is caught in the propeller blast and blown out into the down currents caused by the passage of the wings through the air. These down currents form the dust into a cloud and carry it to the ground as such. The dust cloud is said to be very penetrating, and the particles stick to the foliage. Experiments have also been carried



"Dusting" an American Orchard by aeroplane.

In very large orchards requiring three or more sprayers a duster often comes in handy when rainy weather puts the work behind, or mid-summer shortages of water increase the labor of liquid spraying. Some growers say, "It is enough to work all day without dusting all night in addition." Others don't like the idea of starting the day's work at three a.m. Still others say they prefer to work all of one night in place of having a nasty four-day job with the liquid outfit. Mr. Johnson belongs to the last class. —"American Fruitgrower."

out on Peach orchards and berry gardens.

It is pointed out that aeroplane dusting can only be of practical value to the orchardist when dusts and dusting schedules have become so perfected that the more important insect pests and diseases can be satisfactorily controlled by the use of dust; further, the aeroplane must do the work as cheaply as ground machines; and large acreages are essential, not necessarily in single blocks, but the orchards must be reasonably close together.

# New South Wales

## Pest Control

News and Notes

Irrigation Areas

### PEACH APHIS.

Very serious damage has been done in the Murrumbidgee Irrigation Areas during the past season by Peach aphis, says the "Area News" of 24/5/26.

The pest is one which, although widely spread, has not apparently yet been satisfactorily controlled. The Department of Agriculture is at work on this problem, but some doubt still exists as to the best method of coping with it. With a view to endeavoring to assist settlers in this matter the Commission instructed its officers to keep a sharp lookout for the pest in the autumn, it being considered by some authorities that autumn spray-

far better chance of reaching the insects while they are in the parent stage and thus prevent the present insects depositing their eggs in the fruit buds and thereby storing up trouble for the next spring.

In view of the seriousness of the matter, it is felt that this warning will not be lost on settlers, but that those concerned will see to it that the pest is thoroughly dealt with while in its present stage.

### WOOLLY APHIS PARASITE.

During this season and last year the N.S.W. Department of Agriculture has distributed the woolly aphis parasite (*aphelinus mali*) to 250 fruit-growers' Associations and orchardists, in the main Apple-growing areas of the State, says the "Journal of Agriculture" for July.

### MURRUMBIDGEE RE-EVALUATIONS.

#### An Important Decision.

Mr. Justice Pike's decision in the Stark test case is considered to have established a standard which will advantageously affect all settlers on the Murrumbidgee Irrigation Area. If adopted, this revaluation should mean a reduction in land values of £750,000.

The values placed on Stark's farm by the Water Conservation and Irrigation Commission were £20 an acre for irrigable land and £9 an acre for the non-irrigable, averaging £15 an acre for the whole farm. Mr. Justice Pike's valuation put the irrigable land down at £12/10/- an acre and the non-irrigable at £5, averaging £9 an acre. Soldier settlers, the value of whose farms generally are higher than those of older farms, running into £40 per acre and more in places, will especially benefit by the decision.

### CASTLE HILL SHOW.

#### An Appreciative Letter.

When our Sydney manager wrote to Mr. H. A. Best, the active Secretary of the Central Cumberland Agricultural and Horticultural Association of N.S.W., the following inter-

esting reply was received from Mr. Best:—

Dear Sir,

First, please accept my apology for not replying earlier. Very glad to hear that you appreciated our Show, and it is very nice to hear such a glowing report from you. The members of my council will be equally as pleased as I am with your kind remarks.

The Old Castle Hill Show has been in existence for nearly a century, starting with the old-time ploughing matches, foot-running, and a few exhibits, and was for many years held on private property.

The present ground was made over for show purposes about 40 years ago, and was known as the Castle Hill and District Association. About 25 years ago it was unfortunately disbanded.

Two years later we formed a new Association named the Central Cumberland Agricultural and Horticultural

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tural Association, paid off the debit, £200, and have gone along steadily ever since. As you know, this has been a very dry season, consequently our fruit and farm produce sections were not nearly equal to previous Shows. We have made a start to beautify the grounds with shrubs, flowers, and ornamental trees, and through Mr. G. Wright, we are receiving splendid assistance from the Directors of the Botanic Gardens.

The Hon. Sir E. Owen Cox, M.L.C., is patron of the Association, and gives very valuable assistance, as well as contributing towards the prize fund. We were unfortunate this year, Sir Owen being away in the Old Country, and our very live President being in hospital.

Again thanking you for your very kind remarks.—Yours truly,

H. A. BEST.

Dural, N.S.W.

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**PROMPT RETURNS**

ing is perhaps the best method of control, since if the pest can be eradicated in the autumn it is not so likely to rapidly reinfest in the spring as if the insects are allowed to carry over undisturbed until spring they multiply with amazing rapidity. It is known that a baby aphid in the morning is a grandmother at night.

Information has now been received that green Peach aphis is at present very active on the Peach trees in both Yenda and Griffith districts; it has been observed on practically every Peach orchard visited by officers within the last few weeks. The pest is now going through its autumn stage and can be seen on the leaves of the trees. After the tree has shed its leaves the aphides which are now hatching out will deposit eggs in the fruit buds. If the trees are sprayed at the present time there would be a



## WHITE WAX SCALE.

### Pest Reduced by Hot Weather.

It is reported that citrus trees in the Kurrajong district, and throughout the coastal areas of N.S.W., are this year particularly free of the White Wax Scale.

Mr. T. McCarthy, Senior Assistant Entomologist of the N.S.W. Department of Agriculture, said recently that prolonged hot and dry conditions very often prove fatal to insect life, and supported the view of growers

Wax Scale was young when the short burst of extreme hot weather occurred last January, and, for that reason, it probably was more vulnerable to the extreme temperature.

## M.I.A.

### Areas Under Various Fruits.

The Government Statistician has compiled a census of the plantings of fruit trees and vines on the Murrumbidgee irrigation areas as at June 30, 1925, which shows that the total area of the orchards and vineyards was then 21,883 acres.

Areas of plantings one year old and under represented 1,504½ acres; two years, 3,390 acres; three years, 3,712 acres; four years, 3,188½ acres; five years, 3,441 acres; six years and over 6,647½ acres.

The following are the areas of the different varieties of each fruit and the total yield:—

Apples:—Granny Smith, 438½ acres, Jonathans 61, King David 37, others 58½; total, 595 acres; yield 15,432 bushels.

Pears:—Keiffer 14½ acres, Williams 289, others 94½; total 397½ acres, yield 31,553 bushels.

Quinces:—Total 55½ acres, yield 4,300 bushels.

Oranges:—Mediterranean sweet 41 acres, seville 37½, Thompson's navel, 53½, late Valencia 1,589½, Washington navel 3,067, white Siletta 11, others 75½; total 4,875½ acres, yield 147,088 bushels.

Mandarins:—Total 180 acres, yield 3,316 bushels.

Lemons:—Total 443 acres, yield 31,132 bushels.

Grapefruit:—Total 20½ acres, yield 42 bushels.

Apricots:—Mansfield 97½ acres, Moorpark 121, Trevatt 2043½, others 47½; total 2,309 acres, yield 113,822 bushels.

Cherries:—Half-acre, yield 20 bushels.

Nectarines:—Total 60 acres, yield 4,592 bushels.

Plums and Prunes:—Prune d'Agen 527 acres, Robe de Sergeant 770 acres, others 207½; total 1,504½ acres, yield 57,514 bushels.

Almonds:—Total 378 acres, yield 42,138 bushels.

Olives:—Total 2½ acres, yield 84 bushels.

Peaches:—Elberta 521 acres, Golden Queen 468½, Goodman's Choice 111½, Lady Palmerston 68½, Levis Cling 141½, Pelora 21½, Phillips' Cling 292, Pullar's Cling 1104½, Salway 34½, Sims' Cling 111½, Selma Cling 62, Thiele's Cling 14½, Tuscan Cling 73½, others 207½; total 3,231 acres, yield 349,356 bushels.

Figs:—Total 88 acres, yield 2,146 bushels.

Persimmons:—Total 1½ acre, yield 60 bushels.

Table Grapes:—Black Cornichon 352 acres, Ohanez 211½, others 34½; total 598 acres.

Raisin Grapes:—Gordo Blanco 189 acres, Sultanas 2,471½, Waltham Cross 116, Zante Currants 230½, others 11½; total 3,018½.

Wine Grapes:—Mataro 38½ acres, Black Shiraz 1,522½, Cabernet 26½, Grenache 214½, Malbeck 12½, Pedro Zimimis 325½, Reisling 208, White

## MARGETSON & CO. LTD.

### Fruit Importers & Salesmen

30 James St. and James  
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LONDON, W.C.

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that the extremely hot weather at the beginning of this year melted the wax and killed the insects. For instance, he found when carrying out investigations with the Fruit Fly in the hottest part of last season in the Richmond district, that maggots in the stone fruits on the trees and on the ground succumbed. The fruit, owing to the direct rays of the sun, had become so hot that the heat was fatal to the maggots.

Mr. McCarthy added that, although extreme heat or cold often causes considerable mortality in insect life, fruit-growers should by no means relax artificial control measures of this and other pests. No doubt, the White

## R. JOEL & SONS

16, 17, 20 RUSSELL ST.  
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LONDON, W.C.2

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New Zealand  
Fruits

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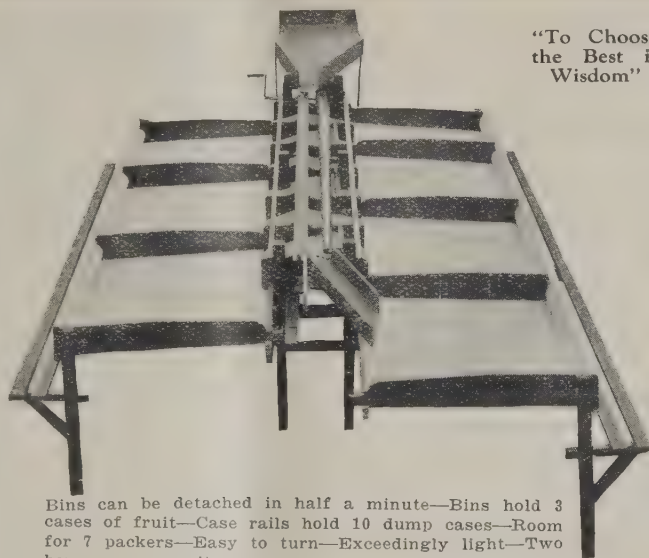
National Provincial Bank Ltd.,  
Long Acre, London, Barclay's  
Bank, Henrietta Street, Covent  
Garden.

Shiraz 236½, Doradillo 991½, others 448; total 4024 acres.

A correspondent from Leeton states that Pelora Cling Peach is being largely planted there, as it is designed to take the place of Elberta.

### PEA NUTS ON THE M.I.A.

The "Murrumbidgee Irrigator" of May 7, states that the area under Peanuts this year is about 300 acres, and the general indication is that the growers who embarked in the industry last year will continue next season. The Marrickville Margarine Company during the past season gave considerable assistance to growers,



Bins can be detached in half a minute—Bins hold 3 cases of fruit—Case rails hold 10 dump cases—Room for 7 packers—Easy to turn—Exceedingly light—Two boys can carry it.

"To Choose  
the Best is  
Wisdom"

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The Cheapest 7-GRADE MACHINE on the Market. Will Grade CITRUS and STONE FRUITS perfectly. Delivery on one side only or both sides as desired

In this Improved "Penang" you have a Grader cheap, good, and faithfully built. It will do your work well. Its parent machine, the double-sided "Penang," with twin rollers, is in use in most of the large packing houses in N.S.W. and other States, and giving great satisfaction.

We do not hesitate to say that the Grader illustrated will be a **Revelation** to you. You will be astounded at the **Quality** of the machine in comparison to the **low price**. Write for leaflet with fuller particulars.

CAPACITY, 800 CASES PER DAY.

Cash Price, without Packing Bins, **£20.**

Cash Price of Packing Bins, **£8/10** - extra.

Made by the  
**LIGHTNING FRUIT GRADER CO.**  
5 Hoddle Street, COLLINGWOOD, Melbourne, Vic.

Cable and Telegraphic Address: "Lightning," Melbourne

besides putting in a crop on the company's own account. The yield of Peanuts in the husk is expected to go from 15 cwt. to over a ton to the acre, and as the price of the nuts is £40 a ton, it is expected that when all charges are calculated the nett result to the growers will be found quite sufficiently satisfactory to warrant further sowings next year. It is the intention of the Marrickville Margarine Co. to experiment during the coming year with various kinds of Peanuts in order to determine which sort is the best adapted for the soil and climate of the irrigation areas.

### CURLWAA IRRIGATION AREA.

The marketing of dried fruits from the Area was very satisfactory, as much as £88 per ton for Sultanias being obtained, prices for Currants and other vine fruits having also increased.

The Citrus crop is light this year, due no doubt to the exceptionally heavy crop last year, and heavy frosts during the setting period.

The determined efforts of the settlers on this Area to combat pests and disease have met with good results as the absence of both is very noticeable, all Citrus fruits, with few exceptions, being generally clean and healthy.

The lining of the channels with concrete is nearing completion, and it is hoped that this work will be completed before the first watering of the season, about the second week in August. With the completion of this work the watering of the Area will be facilitated and the cost of maintenance reduced to a minimum.

The earthwork for the road from the bridge over the Murray River to the Tucker's Creek Bridge has been completed.

### PERSONAL.

Mr. Vincent Ellingworth, of 440 Little Collins-street, Melbourne, left on the "Esperance Bay" on July 23rd on a hurried business trip to England. Mr. Ellingworth expects to be in London about a month, during which time he hopes to make satisfactory arrangements in connection with the next fruit export season.

Mr. A. E. Blunt (Messrs. Lincoln and Blunt, of Australia House, Liverpool-street, Sydney, manufacturers of Qua-Sul and Vitamite) has been absent from Sydney for several weeks past visiting Queensland on business. Mr. Blunt, while in Brisbane, appointed the Australian Co-operative Fertilisers, of Little Roma-street, as their agents. From Brisbane Mr. Blunt visited Gympie, Mary-

borough, Bundaberg, and several other important towns. He reports business very good. After going through the various towns in Queensland, it is Mr. Blunt's intention to pay business visits to Victoria, South Australia, Tasmania and Western Australia. He will also make a special business trip through the North and South Islands of New Zealand.

Mr. John C. McCallum, of Messrs. Gibbs, Bright and Co., Pitt Street, Sydney, was an inmate at a private hospital, Darlinghurst, Sydney, where he underwent an operation recently. We are pleased to state the operation has been successful, and Mr. McCallum has made such progress that he has been able to leave hospital and expects to return to his important duties shortly.

Mr. Gerald Mussen, whose work in organising the Victorian Central Citrus Association is well known and appreciated, and who is now in England, recently underwent an operation for goitre, which we understand was quite successful.

The man who won't profit by the experiences of others is not likely to profit by his own.



## South Australia.

### Fruit Exports : District Reports : News and Notes.

#### APPLE EXPORTS.

##### South Australian Record.

Overseas shipments of Apples from South Australia for the past season totalled 330,000 cases, as against 36,604 cases for the 1925 season. This constitutes a record for the State, says "The News."

The previous record of Apples exported from South Australia was 257,839 cases in 1924. Overseas shipments in that year would have been larger had it not been for the exceptional demand for South Australian Apples by New South Wales, which bought about 250,000 cases from this State.

Of the exports from South Australia this season about 80,000 cases were shipped through the Government Produce Department, and the balance between about 20 other shippers. Owing to the long spell of dry weather in the early part of the year many Apples in some districts were retarded in their growth, and a quantity was rejected by the Government inspectors because of immature size.

#### BERRI CO-OP. PACKING UNION.

##### Good Returns.

It is announced by the manager of the Berri Co-operative Packing Union that the final payment in respect of fruit exported through the Control Board during 1925 by the Union (Pool Pack) has been received, says "The Murray Pioneer" of May 21. Although some delay has occurred in making this payment available, growers will no doubt be pleased to learn that the balance due will approximate £2/10/- per ton, so that the net return on the export proportion of the pack for 3-crown Sultanas will be about £48/15/-.

Referring to the suspension of export licenses in consequence of the English coal strike, Mr. McGlasson said the result to local growers served further to indicate the necessity for railway facilities. Had it

been possible entirely to overcome the transport difficulty during the recent suspension of river traffic, growers would have 190 tons more fruit on the water, (on which tonnage they would have been entitled to the usual advance) before export was held up.

Payments made on the 1926 pool pack to date are: Sultanas £17/10/-, Currants and Lexias £8/3/4.

The shed's previous record pack of Sultanas has been exceeded, but indications are that the Lexia pack will be below the average. A good deal of this fruit has gone to the distillery this year.

The management are contemplating closing down for a period, but due notice of any such action will be given. Operations have been continuous during the season, and so far the shed has not been closed at all.

#### THE BERRI DISTILLERY.

The Berri Distillery continues to maintain its claim to the distinction of being the busiest spot in the settlement, and large tonnages are being dealt with, says the "Murray Pioneer"

For the fortnight ended on Thursday the total tonnage received was 2,784. Of that quantity there were 1,750 tons of Doradillas and 1,034 of Gordos.

The total for the season has reached 10,547 tons, and is made up of Doradillas, 5,876; Gordos, 3,106; various (including Currants), 1,565.

The recent cold weather has resulted in slower fermentation than takes place when warmer temperatures prevail, and the storage capacity is taxed to such an extent that the management have been compelled to close down for the receipt of fruit for a short period, after to-day. The doors will be re-opened for the further receipt of fruit on the 26th inst.

#### SUBSCRIBERS' PAYMENTS RECEIVED.

We acknowledge with thanks having received, at Head Office, the following renewal subscriptions from our readers up to June 30, 1926. The date in brackets indicates to when the subscription is paid. The list does not include payments to our branches in the other States, nor deliveries through our wholesale distributors.

If any reader wishes to have a receipt we will forward same on application.

W. G. Adams (February, '27), A. C. Arnot (June, '26), J. Aggett (June, '26), K. A. Arbuckle (December, '26), W. R. Archibald (June, '27), J. W. Andrew (December, '26), Robert Aitken (March, '28), J. Alexander (June, '27), Abbots Bros. (June, '27), E. Ashby (June, '27), Angaston Fruitgrowers' Co-op. Society (June, '27), G. L. Aldwinckle (June, '27), Brown Bros. (June, '26), H. Beaumont (June, '26), F. G. Brown (June, '26), E. E. Bryant (June, '26), Batlow Co-op. Packing Co. (June, '26), J. W. Bailey (June, '26), A. Brown (June, '27), J. F. Bailey (March, '26), C. Braethwaite (June, '27), Frank Butler (June, '27), A. Boatwright (June, '27), F. A. Bloom (June, '27), J. Bradley (June, '27), Basey and Howie (June, '27), Bisdée Bros. (June, '26), Burgess Bros. (June, '27), N. Brookman (June, '29), Percy Buxton (June, '27), H. Birmingham (June, '27), R. G. Bell (June, '27), A. T. Booth (June, '27), W. Burley (June, '27), E. C. Borghese (June, '27), S. Beavis (June, '27), J. Butterworth (June, '27), G. E. Burman (June, '26), A. C. F. Brockhoff (June, '27), H. S. Cusworth (June, '26), B. Cunish (June, '26), J. Cozens (June, '26), William Cooper and Nephews (April, '27), W. Cawood (June, '26), C. W. Coomber (June, '26), W. J. Curnow (June, '25), J. W. Cox (June, '28), W. H. Chilton (June, '27), E. H. Combe (June, '27), E. R. Cottler and Co. (June, '27), A. V. H. Cripps (June, '27), C. W. Dally (June, '26), H. C. D'Elboux (June, '26), J. S. Dunbar (June, '26), R. J. Dalton (June, '26), R. F. Dyson (January, '27), C. Davis (June, '26), J. Donaldson (June, '27), J. Darwent (June, '27), Denny's Lascelles Ltd. (June, '26), Dickinson Bros. (June, '27), C. E. Elliston (June, '26), J. A. Egan (June, '26), R. W. Evans (January, '26), W. C. Elder (June, '26), F. Ellwood (June, '26), J. Esson (February, '26), A. J. Eastley (June, '27), G. P. Eckley (June, '26), W. Edge (June, '27), H. C. Franks (June, '30), H. Fream (June, '26), C. C. Frazer & Co. (June, '26), C. R. Fardell (June, '26), J. E. Franklin (June, '26), W. E. Fountain (June, '26), S. W. Fagan (June, '26), Wilson Francis (June, '27), J. Firth (April, '27), G. Fountain (June, '27), C. Franks (June, '27), M. Feiglin (June, '27), H. Freeme (June, '27), J. and H. Goodwin (December, '26), F. J. Garford (June, '26), S. S. Gault (June, '26), A. W. Glenn (June, '27), E. Glen (February, '26), E. J. D. Gordon (February, '27), F. W. Green (June, '25), Gottschutze (June, '26), S. O. Gregory (June, '26), J. Grasby (June, '27), D. Graham (June, '27), J. Gill (June, '27), Gibbs, Bright and Co. (June, '27), B. Gosstray (June, '27), A. G. Gunner (June, '27), Hamilton Bros. (June, '26), C. Happ (June, '26), Hicks Bros. (June, '26), H. H. Hawken (July, '27), G. T. H. Heeschen (June, '26), R. E. Haysey (June, '27), J. D. Hunter (June, '27), C. A. Hornidge (June, '27), J. Handasyde (June, '27), H. L. Hatfield (June, '27), Hamerli Bros. (June, '27), W. Hurn (June, '27), F. Hodges (June, '27), S. Hartwick (June, '27), J. Hauenstein (June, '27), W. A. Hawse (June, '27), S. D. Hibbard (June, '27), Percy Hulme

(Continued on Page 382.)

#### "ARBOLEUM" MISCIBLE OIL SPRAY.

Produced by the proprietors of Cooper's Sheep Dip.

Manufactured with a generous supply of emulsifiers, thereby overcoming the usual tendency to separate out. Prices: 40 gallon casks, 2/9 per gall.; 5 gallon drums, 4/9 per gall.

Victorian Agents: NEWELL & CO. PTY. LTD., 189 King Street, Melbourne.



The "Eclair" Spraying Fruit Trees.

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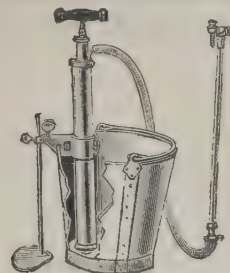
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POWDER SPRAYERS

LIQUID CAPACITIES  $1\frac{1}{2}$  pints to 88 gallons.

PRICES FROM 4/- each.

The above types include machines for Spraying Trees, Bushes, Ground Crops, and for applying Limewash, Whitewash, Distemper, Waterpaint and Disinfectants

Ask your local Merchant for full particulars, or write for catalogue and leaflets to:—

**COOPER, PEGLER & CO. LTD., 24d CHRISTOPHER STREET, LONDON E.C.2**

## Answers to Correspondents

### Grafting Wax and Cross-Pollinating Apples.

B.R.B., Whittlesea, asks:—Will you please inform me the correct recipe for making grafting-wax, to keep grafts airtight? Also will Gravenstein blossom cross-pollinate the Jonathan Apple tree? I note in the "Fruit World" answers re the cross-pollinating of Delicious Apples and Jonathans. Does the same apply to the Gravenstein?

Answer (by E. E. Pescott, F.L.S.):—Grafting wax is made by melting equal parts of tallow (without salt), beeswax and resin. Another formula is beeswax and resin one part each, tallow and lard half a part each. In melting, take care that the mixture does not overflow, or boil over, as it is very inflammable.

Gravenstein, Delicious, Jonathan, Sturmer and Rokewood, all flower about the same time and are useful for interpollinating each with the other.

### Destructive Insects.

R.H.F., Bowenville, Queensland, has sent two insects, of which he says:—No. 1. A small black beetle which destroys flowers of Kumquat, Mandarin at present, also Roses in the springtime. I would like to know a name and treatment to destroy. They have increased this season.

No. 2. A green bug which sucks Figs and Tomatoes, also Cowpea Bean (pods or stalks). I would be

pleased to know the name of this bug, and treatment. They are not present in large numbers.

Answer (by C. French, Victorian Government Entomologist):—

No. (1) Beetles. These are *Macroua concolor*—(no common name). Spraying with arsenate of lead (1 lb. in 25 gallons) is the treatment.

No. (2) Green Bug on Figs and Tomatoes. This has been identified as *Plantia affinis*—also no common name. Tobacco spray, as nicotine sulphate, may be used. Phenyle spray is excellent as a deterrent. It is prepared as follows:—One bar of yellow soap is shredded and dissolved in hot water; one quart of phenyle and 3 lbs. of washing soda are added, and the whole made up to 40 gallons for use.

Mr. French adds:—If your correspondent has any more specimens I would advise him to send them to the Queensland Government Entomologist, who has a fine collection of Queensland insects.

Fowl Manure.—Subscriber 94.—Please let me know through your valuable paper what to do with fowl manure as I have a lot of nice manure. What trees are best to put it on—Apricots, Peaches, or Apples?

Answer (by J. M. Ward, Superintendent of Horticulture).—Fowl manure is of benefit to all kinds of fruit trees.

As compared with stable manure, it is richer in the essential plant foods,

of which nitrogen, phosphoric acid, and potash are the most important.

A liberal dressing would be a ton to the acre, and if previously half a ton of ground limestone (carbonate) had been mixed with the fowl manure, this would make it easier of application owing to its greater friability. On no account should any other form of lime be mixed with this manure or it will cause less of nitrogen by volatilising it.

Fowl manure is best applied either in autumn or early spring.

Answer (by A. F. Thiele, Doncaster).—Re fowl manure. We have had the best results from Peaches when put on in the early spring, at the rate of half a bag to the tree, but it is beneficial to all trees when you require wood and foliage; we have not used it on Apples or Apricots, though we have used it with good results on Citrus, it puts a healthy growth into the trees.

### Re Working Pear trees to Apples.—

"I Wonder," Camden, N.S.W., writes: "As an old reader of your paper, I write to gain information with respect to the re-working of Pear trees to Apples."

"I have a number of vigorous well-grown 'Bergamot' and other Pears ('Packham's Triumph' and 'Marie Louise'), which are unprofitable, and I thought of re-working them to an early cooking apple, of which I have a good variety. My idea was to cut the trees hard back in the dormant season and bud on to the new growth in the following Autumn.



"This operation seems to me easier and more reliable than grafting, and I would be very glad to hear from you if this procedure would be likely to be successful. The trees are 11 years old."

Answer (by W. J. Allen, Department of Agriculture, Sydney):—Some tests have been carried out in a small way, the result of which showed that the Pear is not a suitable stock on which to graft Apple trees, as the number of takes is generally poor, growths are generally weak and consequently cropping poor. The affinity between Apples and Pears is not close enough to produce satisfactory results when the latter are grafted on the former.

If any trees are to be worked over it is preferable to graft them, and if any of the grafts should fail, the shoots growing from the limbs on which the grafts did not take can be budded about the end of January.

Answer (by A. F. Thiele, Doncaster, Vic.):—Re putting Apples on Pears. I would not recommend it. They may unite and grow for a while, but will never be profitable. I would prefer planting young Apple trees in their place.

Answer (by J. H. Lang, Harcourt, Vic.):—The working of Pear trees to Apples is not advisable; even if successfully performed the union would be weak and apt to break with wind or any other undue strain. The resulting trees would also be dwarfed.

If present varieties of Pears are unprofitable, work to those that have proved themselves in the district. By heading the trees high up, a big framework is left to receive a large number of grafts; by this means the

writer has obtained a crop of fruit the third year after grafting.

Should your correspondent determine to replace the Pears with Apples, and the general layout of the orchard permit, the Apple trees could be inter-planted with the Pears, the latter being pruned to produce fruit only, and removed when Apple trees have grown sufficiently to regain the whole space. This would insure a return during the earlier years of the Apple trees.

**Budding Peaches on Apricots.**—"Perplexed," writes:—

1. Can you give me any information gained from growing Peaches on Apricot trees, budded over when mature trees.

2. Also can you inform me regarding growing Peaches on Prunes, which themselves are on Cherry-plum stocks?

The reader is aware that it is possible to obtain Peaches in these ways, but is it a payable commercial proposition to bud Peaches to Apricots or Prunes, or would it be better to replant?

Mr. G. W. Peart, Bairnsdale, replies:—In each case, I would advise "Perplexed" to replant. There will be no commercial success with the Peaches worked in either of the two ways suggested.

Mr. E. L. Young, Ardmora, also replies:—I have had no experience in growing Peaches on Apricot or Plum stocks, but think it would not be a commercial success. It would be better to uproot the Apricots and Prunes and replant. Even if the stocks were Peaches of mature age, it is better to replant than to rebud aged trees.

**To Apply Sulphate of Ammonia.**

When is the best time to use sulphate of ammonia?

Answer:—Very early in September. If used for Citrus it can be applied a little later.

**SCHOOP METAL SPRAY PROCESS.**

It is not only the orchardist who has to adopt spraying processes for purposes of protection. The necessity of preventing rust on iron and steel articles has caused engineers to look for some more permanent coating than paint.

By means of the Schoop Metal Spray process, almost any surface can be coated with lead, tin, zinc and other non-rusting materials. The apparatus used is known as the Schoop Pistol, a device for passing metal in the form of wire through a flame produced by burning gases. The molten metal is broken up into infinitely small particles by a stream of compressed air, and blown in the form of spray on to the article to be coated, which has been previously prepared by sandblasting.

Long lengths of iron such as wind-mill members and other structures, tanks, implements, regardless of size, may all be coated in this manner. The process is extensively used abroad in almost every industry, and is receiving considerable attention in Australia.

The process, which is covered by numerous patents, is handled in Australia by Messrs. Alumino-thermic and Metal Sprayers Ltd., whose advert appears on page 363 of this issue.

## Corkscrew Steel Fencing Posts

All previous defects associated with Iron Posts eliminated

**FIREPROOF. WHITE ANT PROOF.**

Owing to the corkscrew construction of these Posts, they have a tremendous grip in the ground, and it is only necessary to drive them in 16 inches, in practically any kind of soil. We suggest using about a 5lb. hammer for the purpose. The Posts are bored to specification without extra charge. It is necessary to use the ordinary wooden strainers.

**THE MAIN FEATURES ARE:**

**PERMANENCY.**—The Posts will last a lifetime, and will also ensure the Wire lasting a similar period.

**INDESTRUCTIBILITY.**—The Posts are unbreakable, and their flexibility and resiliency enable the fence to maintain its true position, even after being subjected to pressure. The fact that a single post will bend when not in the fence is not a detriment, but we claim it to be one of its greatest merits, as any other iron or steel post of somewhat similar size is liable to fracture when subjected to pressure, which is impossible with the Corkscrew Post. This Post when bent can just as easily be straightened again without injury to the post.

Obtainable from—

Sole Agents for  
N.S.W.—

**The Commonwealth Wool & Produce Co. Ltd.**

**CHEAPNESS OF RAIL TRANSPORT AND HAULAGE CHARGES.**

The Posts are carried at the same rate as fencing wire on the railways, viz.: 2 tons or over, "A" Rate; 1 ton, "B" Rate; under 1 ton, 1st class. For a distance of, say, 300 miles, the rates would be:—

|                 |         |         |
|-----------------|---------|---------|
| "A" .....       | £2 7 6  | per ton |
| "B" .....       | £3 7 6  | "       |
| 1st Class ..... | £6 14 2 | "       |

At "A" Rate the cost per post would be approximately 1d. for the above distance. These posts can be despatched with wire netting and fencing wire to make up minimum quantities to save freight.

**CHEAPNESS AND QUICKNESS OF ERECTION.**

The saving in this item will be found to be enormous.

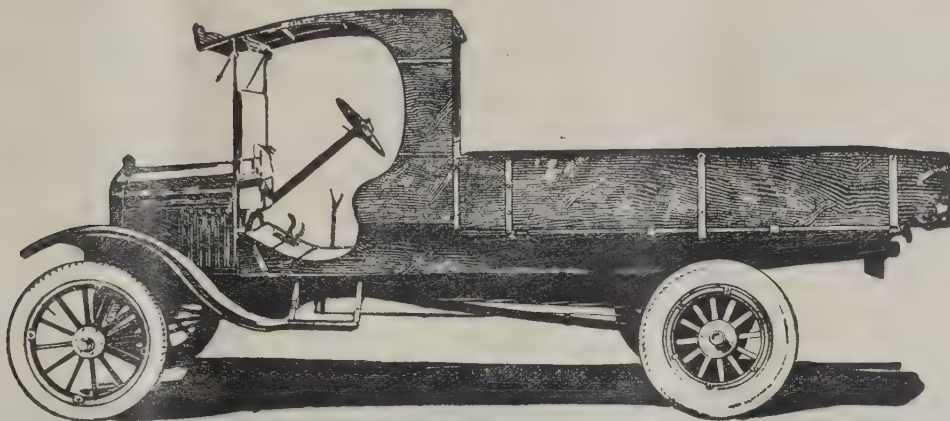
**PRICES AND WEIGHTS:**

5 feet, about 4½lbs. (500 to ton), 1/6 each. 5 feet 6 inches, about 5 lbs. (450 to ton), 1/7½ each. F.O.R., Sydney. Longer Posts can also be supplied.

Station Supplies Department (1st Floor)  
3 Bent Street, SYDNEY

**£ 183**

F.O.B. Ford Works in this State.



## A GREATLY IMPROVED TRUCK

**M**ONEY saving advantages, due to Ford manufacturing methods, are again demonstrated in 10 important improvements made to the Ford One Ton Truck, the most popular delivery vehicle in Australia. To-day, eighty per cent. of all One Ton Trucks in the Commonwealth are Fords—a most remarkable testimony to their service, reliability and economy.

Now, 10 important improvements have been made in the One Ton Truck—improvements which mean even better service and longer life than ever. A comparison of the Improved Ford Ton Truck with any other will soon convince you that the Ford is the soundest truck investment you can make. Inspect the Improved Ford One Ton Truck without delay. Any Ford Dealer will gladly demonstrate the

### 10 NEW FEATURES

1. Transmission Bands removable through Transmission Inspection Plate.
2. Engine set on top of Frame.
3. Pads under Crank Case Arm.
4. 17-inch Steering Wheel.
5. New type combined Petrol Choke and Adjuster.
6. 5-1 Gear in Steering.
7. Rear Tyres 30in. x 5in.
8. Rear Wheel sturdier and smaller in diameter.
9. New Tyre Clamps on Rear Rims.
10. No. 4 big end now more accessible by new design Crank Case.

### FORD TRUCK PRICES

Chassis (without Electric Starter), £155. Truck (complete with Standard Body), £183. Chassis (with Electric Starter), £175. Truck (complete with Standard Body and Electric Starter), £203. All prices F.O.B. Ford Works in this State.

EASY TERMS. SEE NEAREST FORD DEALER.

FORD CARS AND TRUCKS ARE BRITISH EMPIRE PRODUCTS



# N.Z. Fruitgrowers' Conference

## Important Matters Discussed

**T**HE TENTH ANNUAL CONFERENCE of the N.Z. Fruitgrowers' Federation was held at Wellington on June 30 and July 1, there being a large attendance of delegates. In opening the Conference the Minister for Agriculture (Hon. O. J. Hawken) expressed his belief in the future of the industry, and promised that the Government would continue its assistance.

The annual report was presented by the President of the Federation (Mr. T. C. Brash), who said that the outstanding feature of the past season had been the big increase in the production and export of fruit, the latter having increased by 210 per cent. Last year the export was

years, New Zealand growers would be able to supply the whole of the local demand for Lemons. A deputation from the Conference later placed the facts before the Ministers concerned, and received a favorable hearing.

### Exportation to Australia.

A resolution was adopted: "That the Government be requested to make urgent representation to Australia to allow the importation of New Zealand-grown fruits into that country."

The mover, Mr. F. Firth, of the Oratia Association, pointed out that every year New Zealand imported Australian Oranges, Mandarins and Cherries, which might be opposed on the same grounds as Australia's ob-

sawmills to the New Zealand fruitgrowers at cost prices.

It was resolved that the Federation should take up the matter of advertising, with a view to increasing the consumption of fruit in the Dominion.

### Insect Pests.

On the motion of Mr. C. Weaver (Central Otago), it was decided that the Federation be asked to bring pressure to bear on the Government to go in for more research work in connection with the control of insect and fungoid pests. Mr. Weaver spoke of the heavy losses which had been incurred in Otago owing to the prevalence of these pests, the earwig in particular, which was getting beyond control. Some money for research work would be a tremendous help.

Mr. J. A. Campbell, Director of Horticultural Department, said everything was being done to find a



Delegates at the New Zealand Fruitgrowers' Federation Conference, held at Wellington on June 30, 1926.

230,000 cases, whilst this year the number amounted to 730,000 cases, an advance in money value from £175,000 to half a million sterling.

### Duty on Apples and Lemons.

A remit by the Canterbury Association, that the duty on imported Apples be increased was adopted.

At the instance of the Auckland Council, it was decided to take all measures possible to prevent the dumping of cheaply-grown Italian Lemons in the country. In reply to a question, it was stated that in two

jection to N.Z. fruit, New Zealand having recently been declared free of fruit fly.

Another delegate considered that it should be impressed upon the Australian growers that there was no fruit disease in New Zealand with which they in Australia were not affected also.

### Fruit Cases.

Numerous resolutions were submitted regarding fruit cases, and it was decided to urge the Government to supply fruit cases from the State

natural enemy to fight the earwig pest. Dr. Tilyard was in England, and Mr. Myers was in America, and were making special inquiries into the matter.

### Orchard Tax.

Mr. G. A. Howse (Auckland) moved for the retention of the Orchard Tax as the most equitable method of raising funds for organisation. Canterbury delegates opposed the continuance. After discussion a Committee was appointed to report on the matter.



SCHLOESING'S READY MIXED

## BORDEAUX SPRAY MIXTURE

(Guaranteed to Contain from 50 to 56 per cent. Copper Sulphate)

An Absolute Preventive for Downy Mildew of the Vine, Curly Leaf and Brown Rot of the Peach, Shot Hole of the Apricot, and Cure for Black Spot of the Vine, Apple and Pear, Blue Mould on Oranges, Sleepy Sickness of Tomato (Tomato Wilt), Mildew on Roses, Black Spot on Carnations (if sprayed as spots crack), and other Fungus Diseases.

Schloesing's Mixture has been in use in Europe for about 30 years, and has the advantage of doing away with the large amount of labour necessary in preparing the ordinary Bordeaux Mixture. It does away with the necessity for—

1. A stock mixture of Bluestone.
2. A supply of lime milk.
3. Mixing the two in proper proportions.
4. Testing with paper for acidity, etc., as it is slightly alkaline.
5. Straining, as there is no grit in the material.

Do not add anything for "Sticking" purposes, THE MIXTURE WILL "STICK" ITSELF.

Schloesing's Mixture has achieved remarkable success in N.Z. and Tasmania, where large quantities of it are used.

Many testimonials have been given as to its efficacy, and above all, it is the ease with which it is used which recommends it to growers.

Dear Sirs,— Cygnet, Tas., 10th April, 1926.

I have used your Spray Powder for Black Spot, and can highly recommend it as it has given me every satisfaction.

I have given your traveller an order for 2 c/s for next season.

Yours truly, (Sgd.) I. D. WYLIE.

Dear Sirs,— Cradock, Tas., 27th March, 1926.

Please order for me 2 c/s of the Schloesing's Bordeaux for Black Spot.

I used it last season, and found it to be quite as efficacious as the old Bordeaux Mixture, and much more easily mixed.

Yours truly, (Sgd.) JOHN BRYCE.

Sole Agent for Victoria:

### LAWFORDS FRUIT EXCHANGE

Pty. Ltd.

::

### DONCASTER

Vic.

#### Railway Freights.

It was resolved that the Railway Board be asked to submit proposed alterations in the freight rates on fruit to the Federation before putting them into effect.

#### Organisation.

A resolution in favor of organising the whole of the fruitgrowing industry was adopted.

#### Asiatics Debarred.

Quoting the "White Australia" policy, Conference resolved by a large majority that the Government be urged to pass legislation that all Asiatics be debarred from coming into New Zealand for ten years, and that all members of Parliament be asked for their support.

#### Petrol Tax.

Mr. A. M. Robertson, Hawke's Bay, moved that the Government be requested to have the system of motor taxation altered from the present flat tax on motors to a petrol tax, users of petrol for purposes other than highway locomotion to be allowed a rebate as in the United States of America.

It was stated that the Farmers' Union would support the proposal, and the cost of collection would be greatly reduced. The man paying on petrol tax would pay in proportion to his use of the road. The resolution was carried unanimously, and a

deputation appointed to lay the matter before the Minister for Internal Affairs.

The Conference was a highly successful one, and delegates were tendered a complimentary dinner and otherwise entertained.

#### NEW ZEALANDER VISITS AUSTRALIA.

Views of Mr. R. Paynter, of Hawkes Bay.

During his recent visit to Australia, Mr. R. Paynter, President of the Hawkes Bay Fruitgrowers' Association, expressed opinions as follows:—

The Export Board of Control is working well. The Board is comprised of four growers' representatives and two Government nominees. The growers' representatives are as follows:—Auckland, 1; Hawke's Bay, including Taranaki and Wellington, 1; Nelson, 2. The Otago district voted themselves out of the scheme. The funds are received from a levy of 2d. per case exported. The Chairman of the Board, Colonel Gray, who is now in England, is exceedingly well thought of throughout the Dominion.

Mr. Paynter, who was greatly impressed with the Victoria Markets, was anxious to see our system of spraying. He referred to the system which is operating in some parts of

New Zealand, and which is considered to have considerable possibilities, viz., that of permanent piping in the orchard. Mains are laid, with laterals, and a standpipe to serve each tree. Several prominent orchardists have had this system in operation for two years, and think well of it. The cost of installation is not heavy, and the power is derived from a central delivery stand in the orchard. There is good spraying force, very little, if any, power being lost. This system is said to be working well in some of the American States. One advantage is that it obviates the drawing of the heavy spraying outfit across the orchard lands, thus making cultivation easier; and further, spraying can be more quickly attended to after rain.

Mr. Paynter states that it is hoped shortly to adopt control in local marketing, particularly in regard to grading. In this the wholesale and retail distributors are in hearty accord with the growers. The population of the Dominion is only 1,200,000; hence the home market is too small to consume the amount of fruit produced, and export is an absolute necessity.

The Institute of Horticulture is also stated to be working well.



## Queensland

Pineapple Pack Satisfactorily Sold : New Seedling Pineapple : Bunchytop  
in Bananas : News, Notes and Correspondence

(By Our Correspondent.)

THE MOST CHEERING INFORMATION for the fruitgrowers has been contained in the publication of a report by the C.O.D., that arrangements have been completed for the disposal of the pack of winter Pineapples at an enhanced rate, also that an unlimited market has been secured for canned Peaches at remunerative prices.

The Pineapple branch of fruit production has been in a rather parlous state for some time, and the prospects for canning Peaches doubtful, but the prospects for profitable extension seem now reasonably assured.

Difficulty has been experienced in respect of imported temperate fruit trees into this State on account of the reported presence of crown gall, particularly on roots of Apples. Conflicting opinions exist regarding the identification of the disease.

The Ministers' Conference recently held in Brisbane had various important matters for consideration, but as applied to the fruit industry the question may be asked, "are the results of their deliberations or recommendations given effect to?" From published reports of last year's conference, various moves toward unanimity between State regulations were agreed upon, but as far as we are concerned, there has been little, if any, evidence of action, except, perhaps by changes in local regulations and standards tending to further complication.

Undoubtedly this State is at a disadvantage on account of its preponderance of tropical fruits, but a mutual understanding should be within reach whereby standards applicable to these should be complied with in Southern States, and a similar condition imposed on imports as applied in their State of origin.

The export of undeveloped Pineapples is mainly responsible for this reference, for it is much to the discredit of the growers that a very high percentage of the exported fruit is far below the standard of maturity and little above the quality of pig feed. Fruit such as Pineapples and Citrus develop no appreciable sugar content when gathered, consequently an excess of citric acid and lack of flavor cannot be rectified by keeping.

Local fruit markets have been kept well supplied, particularly with Southern fruits—prices for Oranges have been in keeping with their sugar contents—rather low—but Mandarins have commanded most satisfactory prices for first-class fruit. Custard Apples fluctuate materially, and here again immature fruit which can never ripen has its baneful influence.

Rough leaf Pineapples are not keenly sought after during winter months on account of the presence of "black heart" prevailing in fruit from cold or poorly drained localities.

A seedling variety raised at Ormiston is claimed by the raiser as being totally immune from this feature, which is quite likely, as the plant indicates a cross between the rough and smooth leaf type.

As with the Banana, we plod along

'Phone Central 8479

### F. W. Vear

Fruit Importer  
and Exporter  
COMMISSION AGENT

49 WILLIAM ST.,  
MELBOURNE, VIC.

Solicits consignments of APPLES,  
ORANGES, BANANAS, PINES and  
all other fruits.

Account sales with cheque daily.

trying to improve tropical fruits under semi-tropical conditions, totally ignoring the bounteous facilities profusely provided.

BUNCHY TOP IN BANANAS.

Professor Goddard, of Brisbane, who visited the northern areas early in June, stated that "There has been no further spread of bunchy top disease, and if the utmost vigilance is exercised on the part of the growers, no further increase in the total number of affected stools should result. Providing growers discharge conscientiously the recommendations made for the control and eradication

of the disease there is every reason for believing that bunchy top need never become a menace north of the Herbert River."

Growers generally were alive to the seriousness of the problem. The chief danger lay in the "backyard Bananas," but the Agricultural Department was taking adequate steps for inspection and control.

Professor Goddard expressed appreciation of the prospects of Banana growing north of the Herbert River, and spoke in the highest terms of the excellent growth made by Banana plants in various parts of that area.

### BANANA EXCHANGE CO-OPERATION LTD.

A BANANA EXCHANGE CO-OPERATION has been formed in Queensland as an effort at co-operation between the grower and those who buy and sell the grower's output. No person will be allowed to become a shareholder who is not either a grower or a buyer or seller of green Bananas. The policy of the Exchange is to better conditions as time progresses, and for this purpose a Board of Advice composed of growers only will be inaugurated, which will act as a link between the growers and the directors of the Exchange.

Each grower can take up one or more shares in the Exchange, but not more than five. The shares cost 1/- per share, and are then fully paid up, with a guarantee that they will be redeemed at par at any time on application. A grower who is a shareholder will receive monthly a refund of 1½ per cent. of the commission charged.

By-laws guarantee to the grower unrestricted competition amongst buyers. The Exchange is prepared to receive consignments from growers, whether shareholders or not, all communications should be addressed to the Secretary, P.O. Box No. 1077N, Brisbane. The Exchange is purely co-operative, and directors are debarred from receiving any salaries or fees. No employee can be a director.

THE C.O.D.

(To the Editor.)

Sir,—May I submit for your readers the following short account of the C.O.D., their activities, their failures and successes (sic!).

The Committee of Direction of Fruit Marketing (C.O.D.) owes its birth to a convention of fruitgrowers which met, under the auspices of the Council of Agriculture, in Brisbane, July, 1923, which convention agreed to cer-

tain "Concrete Proposals," and requested an Act of Parliament to give effect thereto. Amongst these "Concrete Proposals" were the following:—

"The Committee were not to trade. All savings by way of rebates on railage, cartage, etc., etc., were to be handed to the grower."

"The then existing channels of distribution were not at first to be interfered with," all of which the management immediately ignored.

The failure of the Committee of Direction of Fruit Marketing (C.O.D.) is due to want of experience in the distribution of fruit, coupled with a lamentable disregard of human nature and the inbred dislike of the British-Australian race to any form of compulsion, except in moments of national danger.

With one solitary exception, it may be said that the C.O.D. have failed badly in every activity which they have undertaken. Their first act was to confiscate the businesses of those agents who sold green Bananas. The High Court decision compelled them to abandon this line of trade. Their Stanthorpe Tomato pool was badly conceived, and if possible, the management was worse; it resulted in a huge loss to the Stanthorpe district, and was abandoned after a three weeks' trial. The Banana growers were assured of immense profits when the Banana ripening rooms were opened, but after heavy losses these were closed.

#### Bananas.

In competition with the agents, the latest figures show that of the green Bananas coming to the Brisbane market, 74 per cent. are sent to the agents and only 26 per cent. to the C.O.D. So great was the hostility of the growers to the compulsory methods of the C.O.D., that "The League of Freedom" was formed. In the Stanthorpe district each claimed a majority of supporters, notwithstanding the fact that it was from Stanthorpe that the C.O.D. star first shone; it is only some few weeks ago that the C.O.D. at Stanthorpe hauled down their "compulsion flag" and so allayed some of the storm, though the whole of the fruitgrowing districts of Queensland are still seething with discontent.

Growers were told that the opening of two retail shops, two stalls, and five street barrows in Brisbane would accomplish wonders; but after heavy losses the barrows were withdrawn, although only a few days previous to their withdrawal a statement was issued that everything was satisfactory!

#### Strawberries.

The first season that the C.O.D.

managed the Strawberry crop, the growers lost 2d. per lb., compared with the previous season, because the C.O.D. had not the foresight to clear the market of the processed article. They proposed to have a weekly paper of their own, but the growers turned this down, and the C.O.D. wisely closed their "Publicity Department" shortly after, and withdrew their "Publicity Officer."

#### Rebates Not Rebated.

Not a penny of the thousands of pounds which they have received as rebates from railway freights, cart-

◆◆◆◆◆  
**COVENT GARDEN,**  
**LONDON**  
**Ridley, Houlding**  
**& CO.,**  
**Large Receivers of Australian**  
**Fruits.**  
 Solicit Consignments of  
**Apples, Pears, &c.,**  
 Best market prices and prompt  
 account sales returned.  
 Correspondence invited.  
 Representative in Victoria  
 THE  
 International Fruit & Mercantile Co.,  
 410 Flinders Lane, Melbourne  
**MURDOCH BROS., Hobart**  
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**HAMBURG**  
 (GERMANY)  
**J. H. Lutten & Son**  
 Hamburg (Germany)  
**Fruit Brokers & Auctioneers**  
 Established 1835  
**FINEST TABLE APPLES**  
**A SPECIALTY**  
**Sale Room "Fruchthof"**  
 Consignment of Apples Solicited  
 Best market values and  
 most favorable conditions  
 Cash advances made if desired

age, rebate of part commission from selected agents, has been returned to the growers, whilst the management has been carried on with high salaries, high fees, and is an exemplification of the old saying, "Easy come, easy go." They did not inaugurate the system of bulk loading with its attendant rebates, because this was a feature of the S.Q.F.S. Society, which they absorbed, and if a return of these rebates were made to the grower in accordance with their "Concrete Proposals" as stated above, they could not carry on for ten minutes.

Their limitation of agents in the Southern States was turned down by the growers on a poll being taken.

It is a pity that such blundering incapacity should wreck an organisation which, as I have repeatedly stated, should be of service to the grower and to the State of Queensland; they must, however, recognise that whatever their functions may be, they must cease trading.

The propaganda of the C.O.D. against the agents was of a scandalous nature. I have no brief for the agents, my firm having retired from the agency business in 1918, but my experience extending over 20 years is that as a class, the Brisbane agents will compare favorably with any other class of the mercantile community, and these unfair tactics of the C.O.D. were certain to rebound against them as time went on. The management, puffed up with socialistic theories and backed by an Act of Parliament, were prepared to scrap experience just as their Chairman said that "the law of supply and demand was as dead as Julius Caesar."

#### Success With Pineapples.

Their activity among Pineapples is the only one where there is some possibility of success and bears out my contention, that they have an opportunity to accomplish much good to the grower and for the State if they will cease all trading activities. The Pineapple agreements may well be considered within their proper and legitimate functions, and whether final success be achieved or not, it is at any rate a proper activity and one which comes well within the scope of the "Concrete Proposals" which gave them life.

In conclusion, Mr. Editor, Queensland growers are not, in my opinion, ready for too great a dose of socialism, and where socialism is of the Moscow variety, the "League of Freedom" will keep its flag flying and their leaders are prepared at any time to enter the field and renew their fight if necessary.—Yours, etc.,

W. SAM. JOHNSON,

Managing Director,  
 R. Crollick Ltd.,

Roma Street Markets, Brisbane,  
 May 27, 1926.







## CITRUS FRUIT FOR EXPORT.

### The Need for Careful Handling.

The production of Citrus fruit has increased enormously during the last few years, and the disposal of the crop may cause some concern to thoughtful growers. The seriousness of the position is more acutely realised (write officers of the Fruit Branch of the New South Wales Department of Agriculture) when one reflects upon the competition of other countries in which Citrus fruits are grown. The position calls for application and determination. The essentials of success are quality and economy in production, thorough standardisation in grading and packing, and intelligently directed distribution. There can be no doubt that an overseas outlet for our surplus fruits must ultimately be found, and there are certain conditions which must be observed by those concerned in growing, grading and packing, if satisfactory results are to be achieved.

### A Fundamental Fact.

There must be care in handling. Many growers have not yet accepted

or recognised the fundamental fact that care in handling is absolutely essential to successful export. The skin must be kept in a sound, unbroken condition. Broken skins give access to rot organisms, which, having gained entrance, quickly effect the decomposition of the fruit. It is not an uncommon thing to see growers carelessly plucking fruit from the tree, or, if the fruit is clipped, leaving long stalks which cause damage by puncturing the fruit when it is put into bag or case. The fruit is often dropped into the picking sheds, or poured carelessly into boxes into which nails or splinters project. It is often jolted over rough roads, and on reaching the packing sheds is just as roughly treated as on the orchards or in transit. Cases are often stacked on the bulge, and are frequently walked over, so that undue pressure is placed upon the contained fruit. Is it any wonder that adverse reports often come to hand respecting the condition in which fruit is placed upon the market? Frequently, unfortunately, the results of careless treatment are not apparent until after the fruit has left the orchard, and this causes serious misunderstanding between growers and agents.

### Points to Observe.

Some of the most important points to be observed in connection with the export of Citrus fruits are as follows—

Do not pluck the fruit; clip it close to the button.

Handle with extreme care.

Do not drop the fruit into the picking bags—place it carefully.

Pour the fruit carefully from picking bags to boxes.

Examine the boxes carefully and remove all grit and protruding nails.

Do not jolt the fruit over rough roads.

Grade carefully for quality, and

send no fruit that is not of high standard.

See that the sizing machine is working properly, and that none of the fruit is too tightly squeezed or jammed.

Use a good clean case.

Use a good quality wrapper.

Pack neatly and tightly.

Stack cases on their sides.

Do not export large coarse fruit.

When Navel Oranges are shipped exclude freaks.

Do not export misshapen fruit or fruit with loose puffy skins.

Oranges intended for export should be clean, well-shaped, fine-skinned, juicy, not raggy, well flavored, and possessing good carrying qualities.

### CITRUS CROPS AT TRESCO.

Mr. J. P. Greenwood, Manager, Treco Fruitgrowers' Co-operative Association Ltd., reports on July 8:—The Citrus season at Treco is now in full swing. Good crops of Oranges and Lemons are showing, and to date there has been 2,000 cases of Oranges dispatched through two channels—firstly, Melbourne market; and sec-

## T. STOTT & SONS Fruit Merchants

Established 1882

A Trial Consignment solicited from Growers in all States.

Prompt Settlement.

11 WESTERN MARKET,  
Melbourne

### Bankers: COMMERCIAL BANK OF AUSTRALIA.

Collins Street, Melbourne.

Remittances with Account Sales rendered promptly.

### FOR A SQUARE DEAL

Consign your Fruit to

## FRUITGROWERS DEPOT

(Licensed and Registered by the Government of Victoria).

Managing Director—M. J. FOY.

Wholesale Fruit and  
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Telegrams: FRUITGROWERS,  
471 Flinders Lane, Melbourne.

only, to private orders, which source generally absorbs about 5,000 cases of our total crop.

Negotiations are in progress in connection with the installing of a brushing machine for our Citrus fruits and we are installing a Lightning Fruit Grader.

Cover crops in Citrus groves are looking exceptionally well, the main crop being field Peas; some growers have already started to plough same in.

#### WANGARATTA.

The Annual Meeting of the Wangaratta Citrus Growers' Association was held during April, and the following office-bearers were re-elected for the ensuing year:—President, Mr. Jas. Lindner; Vice-Presidents, Mr. A. H. Smith and Mr. A. A. Emslie; Secretary and Treasurer, J. P. Larkings; Auditors, Messrs. A. H. Smith and W. M. Gibson.

The annual report revealed steady progress and a successful year's operations. The balance-sheet revealed a satisfactory credit balance.

During the month Mr. W. Murray, of the Vacuum Oil Co., visited the district at the request of the Association, and gave the members an account of his trips through some of the important fruit producing and consuming parts of the world. This little talk was interesting and was appreciated by members.

The season has been unfavorable for both fumigating and spraying for scale insects of Citrus trees in this district. During the early portion of the summer, drought conditions prevailed, and numbers of Citrus trees showed signs of distress and these could be neither sprayed nor fumigated; then followed the continuous falls of welcome rain which again caused the suspension of these important operations. However, the district is a clean one in so far as red scale goes. Brown scale, which was subjected to deadly devastation at the hands of the tiny wasps during the early part of last spring, has again gathered strength in numbers and is fairly prevalent throughout the groves of the district. Growers are quite determined to keep this pest in check.

The Citrus crop for this district is very light this year, with the exception of young groves just coming into bearing; these latter groves are all well cropped. Despite this fact the Citrus crops for the district will be 50 per cent. lower than last year.

The suggestion contained in the "Fruit World" (May issue), that V.C.C.A. Annual Conference should be

held in country centres is a very commendable one, as it is one where the influence of environment would have a beneficial effect.

#### GOSFORD CITRUS CROPS.

The manager of the Gosford District Packing House Ltd., reports Orange crops generally in the Gosford district are on the light side. As far as can be estimated, we should say that the fruit to be marketed will be about 75 per cent. of a normal year. This applies to the older trees, and in addition there are a large number of trees either just bearing or in their second and third year. Fruit from these latter trees will probably bring the total crop to somewhere near the quantity marketed last year.

Trees generally bloomed very heavily after the rains, and if the setting is allowed to stay on there will be an exceptionally large quantity of second crop Oranges to be disposed of in the early months of 1927.

Winter crop Lemons will be very light, but there is a very fine setting for the summer crop.

Quite a number of the orchards stood up to the dry weather in a wonderful manner, and in addition to having an average crop of clean fruit, it is also of the right size. The comparison of the different orchards is very interesting.

#### LEMON CURING.

Mr. A. W. Schwennesen, of "Elimattor," Gonn Crossing, who has been conducting extensive experiments in regard to the curing of Lemons, states that his plant is now nearly perfected, and he hopes to obtain very definite results by the end of this season.

Lemon curing appears to be the only solution of the present difficulties, and other growers are awaiting the results of the experiments with considerable interest.

#### CITRUS SECTIONS AT ROYAL SHOW.

The V.C.C.A. directs the attention of District Secretaries of Citrus Associations to the schedule of prizes for the Royal Agricultural Show to be held at Flemington from September 16 to 26, which includes many sections for Citrus. An exhibit at the Royal Show constitutes a fine advertisement for a district.

#### FRUIT MARKETING ORGANISATION.

Arrangements have been completed by the Fruit Marketing Organisation of the State Fruit Advisory Board

for the supply of Oranges and other varieties of Citrus fruits direct from grower to consumer. The prices are as follows:—

Navel Oranges (selected large sizes), to end November, 7/- half case, 12/- case; common Oranges (any size) to end November, 7/-, 12/-; Lemons (medium size), to end December, 5/6, 9/-; Mandarins (medium size), to end November, 8/-, 14/-; Grape Fruit (used as an appetiser), to end July, 11/-, 20/-; Sevilles and Pomelos (for marmalade), to end August, 6/-, 10/-.

Apples can be supplied from cool stores at the following prices:—

Jonathans, to end of September, 12/- case; Spitzenburg, to end September, 10/6; Statesman, to end September, 11/-; Rokewoods, to end September, 11/-; Yates, to end November, 13/-.

By special arrangement with the Railways Department, stationmasters can accept orders for fruit at the above rates.

#### CITRUS PACKING COMPETITION.

At the Gosford Citrus Show to be held on August 15, a valuable cup, presented by Mr. Isaac Chapman, of Lisarow, will be competed for by Citrus packing sheds.

The conditions provide that each packing house entering must permit representatives, nominated by the Show Committee, to select upon the Sydney market two cases of fruit sent down for sale in the ordinary course of business. By this means a regular commercial product of a packing house is obtained, and not one which is specially prepared for exhibition.

#### DUST INSTEAD OF SPRAY.

Scientific developments of late years have brought into favor the use of dusting powders instead of liquid sprays for many of the fungus diseases of Grape vines and fruit trees. This practice is already in considerable favor in America, and seems likely to become general in Australia. The dusting treatment appears to be both cheaper in original outlay and quicker in application than the liquid spraying method. At demonstrations on the River Murray last year, growers were favorably impressed with the rapidity and ease with which the vines were dusted. A booklet giving comprehensive information on "Cloudform" dusts and dusting apparatus may be obtained on application to Messrs. Gibbs, Bright and Co., whose advertisement appears on page xiv. of this issue.



## Tree and Fruit Census.

America Compiles Records to See if There Has Been Overplanting.  
Usefulness of Bureau of Agricultural Economics.  
Australia Needs Similar Enterprise.

The U.S. Bureau of Agriculture Economics is making an extensive survey of Peach orchards, securing records of the number and ages of trees, in an endeavor to learn whether there has been overplanting of Peach trees and to supply information to those who plan to plant, states an American exchange.

Since 1920 there has been heavy planting of Peach trees in the South-east.

In the case of Apples the number of bearing and non-bearing trees in the United States is probably 10 per cent. less than it was in 1920. But the Bureau reports that, in general, the decline in the number of fruit trees has taken place in the scattered farm orchards which are too small to warrant utilisation of efficient spraying machinery.

Therefore the total decline is not reflected in a corresponding decrease in the production of commercial fruit. Although prices of Apples of late have not stimulated planting, it is to be noted that prices of Apples at the time that trees now being planted will bear must be considered rather than the prices to-day.

Suggestions have been made from time to time for the compiling of statistics relative to orchards and the varieties of fruits grown in the several Australian States.

### VICTORIAN STATISTICS.

#### Census Being Taken.

We have received from the Victorian Department of Agriculture, copy of the census form prepared by the Government Statist, which has been forwarded to all fruit and vine growers in Victoria. The return is divided into four sections:—(1) Pome and Citrus fruits; (2) stone fruits; (3) berry and miscellaneous fruits; (4) vines (Grape). When the required information is received and compiled, it will show the total number of each class and variety of fruit, and will enable the Department of Agriculture and others, in addition to supplying information re foreign markets, etc., for surplus fruits, to advise what class and variety it is most profitable to grow, and what fruits are most suitable for particular districts.

Information such as this is most valuable to all concerned; and whilst it is compulsory for growers to fill in the form in the required manner, they should do so from the point of view that they are assisting the fruit industry and themselves in making further progress.

Any information supplied by growers is for statistical and not for taxation purposes. It is proposed to take a tree census every five years. The Department deserves all credit for inaugurating this important work.

### FIGHTING INSECT PESTS IN THE ORCHARD.

#### Codlin Moth.

SEE that all loose bark, bandages and other materials, used for trapping the larvae of these moths, are removed from the trees and destroyed. The bandages may be dipped in boiling water to destroy grubs and chrysalids. The fruit and packing rooms should be carefully examined, as codlin moth grubs often pupate behind the boards and in crevices. Spray the room with kerosene or Lotol to destroy hybernating insects.

#### Pear Mite (Phytoptus).

Now that pruning is nearly done it is advisable to spray for this destructive insect, which is undoubtedly on the increase, in Victoria at any rate. See "Fruit World," July 1, 1926, p. 311.

#### Orange Aphids.

These insects are still in large numbers on Citrus trees, young shoots being covered with them. It is advisable, before spraying, to cut away all old branches and to thin out the trees as much as possible. If any of the tobacco sprays, nicotine sulphate or black leaf 40 is used, good results will be obtained.

Peach Aphids, San José and Apple Mussel Scales, Vine Scale:—See "Fruit World," July 1, 1926, p. 311.

#### Woolly Aphis.

These very destructive insects are still making headway in many orchards throughout the State. For remedial measures, etc., see "Fruit World," July 1, 1926, p. 311.

#### Bryobia Mite and Red Spider.

Spray trees thoroughly with red oil or lime sulphur to destroy eggs of these destructive mites. Apple trees particularly should be sprayed.

#### Cherry Aphids.

It is advisable to spray at once with nicotine sulphate and red oil to destroy the black bead-like eggs that are to be found on the fruit spurs.

#### The Light-brown Apple Moth.

If the greenish larvae of this small moth are noticed on fruit trees, spray with arsenate of lead. Now and again the larvae destroy the fruit spurs of fruit trees and cause a fair amount of damage. They are found practically all the year round.

#### Loopers.

In Victorian orchards there are a fair number of looper caterpillars that attack Apple and other fruits, and also the fruit spurs of many fruit trees. These caterpillars usually appear in fair numbers from August to February and sometimes as late as April. The moths are now making their appearance and egg-laying will take place shortly. Spray trees with arsenate of lead 1 in 25.

## The New South Wales Fruit and Vegetable Agents' and Merchants' Association

The above Association, representing practically the whole of the wholesale selling interests of the Fruit and Vegetable Trade of Sydney, exists to protect the interests of both Growers and Agents, and will welcome communications on all matters affecting the trade which may arise for investigation, adjustment, discussion or determination.

Address all communications to

**HENRY W. F. ROGERS**

Secretary,

Fruit Exchange,

**SYDNEY**

## Victoria

Crop Reports :: District News :: Cool Stores  
Association Meeting :: Apple Export Control Discussed

### FRUIT CROP REPORT.

Report by the Department of Agriculture.

#### Deciduous Fruit.

The quantity of Apples and Pears now held in co-operative and other cool stores is about equal to that of June last year (states the Departmental Crop Report for June, 1927). All fruit is keeping well and realising satisfactory prices in the Australian markets.

From the present condition of deciduous fruit trees, there is every indication of good crops for the forthcoming season.

In all probability the co-operative fruit canneries at Shepparton and Mooroopna will shortly be enlarged with a view of coping with the ever increasing crops of Peaches, W.B.C. Pears and Apricots in the irrigation areas.

Generally speaking, Victorian growers are disappointed with the prices obtained for Apples on the English market. Fortunately for themselves our growers shipped only about 20 per cent. of their Apple crop.

#### Viticulture.

The rainfall in most districts has been well above the average. The subsoil is thus receiving moisture to remedy the drying out it experienced during the abnormal 1925 season. Vineyards in non-irrigated districts should benefit greatly.

In all districts the wood has matured under excellent conditions. After the rather light 1926 vintage the

vines should be fit for a bumper crop next year, given favorable weather during spring and summer.

Though not much noticed, Anthracnose showed itself here and there on trailing cane tips, after the autumn rains. There are ample "foci" for its rapid spread should the spring be wet. Swabbing should not be omitted towards the end of winter. After two seasons free from damage many growers are apt to forget this fungus.

Pruning is well advanced in the majority of vineyards; ploughing rather less so, having been hindered in many localities by frequent rains.

#### Citrus.

The Citrus crop is now being actively marketed. The Orange crop is of excellent quality and fair prices are being obtained. The Lemon crop which was reported as light, will produce, on the main July crop, within ten per cent. of an average season. For this fruit fair prices are being realised. The rains have been general, and green cover crops are making excellent growth in all districts.

#### Fruit Export Season.

#### Railway Statistics.

We are advised by the Victorian Railways that the following number of cases were despatched from various stations during the past export fruit season:—

Harcourt, 78,150 cases; Pakenham, 53,469; Tyabb, 36,987; Somerville, 24,243; Narre Warren, 16,754; Stawell, 16,116; Quantong, 5,106.

### THE BERRY INDUSTRY.

Councillor W. C. E. Jones, J.P., of Silvan, called in recently, and in the course of conversation stated that the production of berry fruits and Passion-fruit had suffered severely through adverse seasons. Owing to the heavy frost and snow of 1925, and the long dry spell during last summer, production has diminished by probably 50 per cent.

There is great need of stabilising the berry-growing industry. The United Berry Growers' Association is doing good work in developing the distribution. There is an increasing demand for bottled Loganberries, Strawberries, etc.

### COOL STORES ASSOCIATION.

THE QUARTERLY MEETING of the Fruitgrowers' Cool Stores' Association of Victoria, was held at Melbourne, on June 22, Mr. R. M. Finlay (President), presiding. There were present: Messrs. A. J. Harris (Blackburn), J. Stevens (Burwood East), H. L. Tomkins and R. Langley (Croydon), R. E. Petty (Doncaster Central), J. Tully (Doncaster West), J. H. Lang (Harcourt), J. W. Bailey (Narre Warren), J. J. Tully (Orchardists), T. W. White (Somerville), R. Read (Templestowe), F. Stockton (Tyabb), W. Lipscombe (private), and the Secretary.

The President feelingly referred to the loss sustained by the industry in the death of the immediate Past President, Mr. Robert Mair, and a motion of sympathy was carried in silence. A cordial welcome was extended to Mr. R. Paynter, President of the Hawkes Bay Fruitgrowers' Association, New Zealand, who was visiting Australia.

Portland Convention.—The action of the President and Secretary in appointing Messrs. R. M. Finlay, W.

## ANOTHER PEST ELIMINATED

No present day Orchardist expects to keep his fruit trees alive and in full bearing unless he can keep down, by spraying with poisonous liquids, the thousand and one insect pests, fungoid growths, and other similar evils to which his trees are always subject.

Just as your trees are attacked, so is all your steel and ironwork, which forms the largest part of tools and implements you buy.

The cancer of rust will eat all your plant unless it is ZINC SPRAYED BY THE SCHOOP METAL SPRAY PROCESS.

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Lipscombe and H. L. Tomkins as delegates to the Portland Convention was approved. Mr. Lipscombe tendered a report on the Convention. Discussion took place on the reconstruction of the Fruitgrowers' Association, the consensus of opinion being that the Cool Stores Association should affiliate with the Metropolitan Section and the Apple and Pear Section, provided the constitution and rules adopted by these Sections were acceptable.

It was resolved that the question of affiliation be discussed at the Doncaster Conference, the date of which is to be arranged.

A resolution was also adopted congratulating the Federal Ministry upon the reorganisation of the Institute of Science and Industry and urging the need of research relating to the cool

The Apple and Pear section, with Mr. J. H. Lang as President, took up matters affecting the interstate and export trade. Arrangements are being made to introduce the bulk loading system for Sydney and Brisbane with Apples and Pears as has been successfully accomplished by Mr. D. G. Wills with fruit for Sydney from the Goulburn Valley.

A satisfactory membership is expected in the near future. For the present the Harcourt Fruitgrowers' Progress Association and the Quantong Fruitgrowers have decided not to join.

The Executive also favors control of all Australian export Apples by legislation, and has urgently asked the Minister for Markets (Mr. Paterson) to have the necessary Bill introduced at once, so that the Control Board can function in the 1927 export season.

#### VICTORIAN FRUIT COUNCIL.

New Movement Launched on a Stormy Sea.

THE first meeting of the newly arranged Victorian Fruit Council was held at Melbourne on July 6. There were present, Messrs. J. Tully, R. M. Finlay and A. McCully (Metropolitan), J. H. Lang, J. W. Bailey and F. Thomas (Apple and Pear section), J. A. Rushton and F. Cooper (Canning Fruits), B. S. B. Cook (Victorian Central Citrus Association), and J. M. Ward (Superintendent of Horticulture). Mr. J. H. Lang was elected Chairman, and Mr. R. E. Boardman Secretary pro tem.

The Chairman answered several questions asked by Mr. Cook regarding the constitution. It was decided that the Chairman get into touch with Mr. Brentnall (Chairman V.C.C.A.), with a view to the Citrus Association joining in membership.

Mr. Ward said that as he understood the position, the Apple growers appeared to be satisfied with their organisation as at present. The Government, however, had assisted largely with finance for the erection of cool stores. The dried fruits were catered for by means of Control Boards. For the soft fruits the Government had provided money for canneries. Citrus had had no help from the Government. They asked for a straight-out levy. The V.C.C.A. spoke for 80 per cent. of the growers, and the Minister contemplated a sectional tax for the citrus growers.

Mr. Thomas moved, "That this Council believes it is impracticable to finance any plan by voluntary levies, and that the Ministry be asked

to introduce legislation to raise funds by means of an orchard tax or case levy, money so raised to be passed over to recognised bodies of organised fruitgrowers."

Mr. Cooper seconded.

Mr. Tully said the Member for Evelyn (Mr. W. H. Everard, M.L.A.), had been criticised for opposing the orchard tax. He (Mr. Tully) was present at the meeting referred to, and would state that a wrong impression had been circulated. Mr. Everard had declared he would oppose the orchard tax "if the funds were to be used for the State Fruit Advisory Board, or the Fruit Marketing Organisation."

Mr. Cook: "He is a silly old blather-skite."

Mr. Tully: No one has worked harder for the fruit industry than Mr. Everard. I will defend the absent Member. If he were here he would be quite capable of answering for himself.

## J. G. MUMFORD

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storage of fruit and the control of insect pests and fungus diseases.

The meeting then terminated.

### Victoria.

ARISING out of the resolution of the Victorian Fruitgrowers Convention at Portland, an effort is being made to organise the industry into several sections, viz., canning fruit section, Apple and Pear section, metropolitan section, and the Citrus section.

As the canning fruit growers and the Citrus growers have their own associations, it remained for the two other sections to effect better organisation, and meetings have been held accordingly.

The Metropolitan Association elected Mr. John Tully President, and Mr. J. W. Aspinall Secretary, and by taking a keen interest in Victoria Market problems and other important matters, the Association is securing the support of growers.

## E. ROBINSON

(A. Am. I. E. E.)

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After further discussion the resolution was carried.

In reply to Mr. Rushton, the Chairman stated that the £25 from each section was deemed sufficient for the first year's working.

On the motion of Messrs. Thomas and Bailey it was decided that a sub-committee be appointed to assist in getting the Orchard Tax Bill enacted. The sub-committee appointed were Messrs. Lang, Thomas and Finlay, with power to add.

#### SHIPMENT OF FRUIT TO CHINA.

A consignment of 250 cases of Apples for China was arranged for shipment per s.s. "Changte," on July 15. The Minister for Agriculture has been asked for the subsidy of half-freight, as promised by him last year. The consignment was filled by Harcourt growers.

#### Canned Fruit Export Control.

A Bill designed to control the export of canned fruit is now before the Federal House of Parliament.



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# Fruit Canning Industry

## Interesting News Items

### GOOD PROGRESS AT SHEPPARTON.

May was a record month in the history of the Shepparton Cannery, over 1,000,000 tins of fruit being shipped overseas. Local growers expressed gratification at the receipt by the cannery of £37,000 for the sale of Pular's Cling processed Peaches. Rigid Custom's examination of the fruit exported had disclosed no fault in any way. The cannery is taking up the manufacture of Melon jam, which is finding ready sale.

At a meeting of the Shepparton Irrigationists' Association on July 11, the Chairman of Directors (Mr. A. W. Fairley), traced the rapid development of the industry, which had increased by 20 per cent, yearly since its inception in the season 1919, when 1,008 tons of fruit was processed, to last season, when the output was 6,093 tons, which was 1,008 tons more than in the season 1924-25. Such progress made an extension of the cannery and plant imperative, and the directors proposed to expend £26,000 in that direction. The additions would include rooms for jam making, case making, etc., two new lines of cookers, boilers, engines and motors. The can-making plant, which had already turned out more tins than any other factory in Australia, was also to be enlarged and made more efficient so as to be able to turn out from 17,000,000 to 18,000,000 tins next season.

The profits made last season by the cannery would supply the money for these improvements. The whole crop of Apricots would be taken, also the whole crop of Cling Peaches, except-

ing Orange Clings, which were un-payable and to be weeded out within three years. It was the quality of the fruit that was mainly responsible for the excellent position of the cannery, and if the growers understood their own interests they would do nothing to weaken the reputation attained by the S.P.C. brand of processed fruit.

### ARDMONA FRUIT PRODUCTS.

There was a large attendance of shareholders at the first half-yearly meeting of the Ardmona Fruit Products Co., held on July 2. Advice was received that the Treasury had approved an additional loan of £20,000 to increase the capacity of the plant to handle 4,500 tons, the company to issue an additional 20,000 shares and the loan to be repayable in ten years.

The Chairman said it had been decided to enlarge the plant rather than to erect a cool store and prolong the canning season. The report showed that 3,300,000 tins had been processed during the season, and the quality of the fruit throughout was excellent. The sales throughout the Commonwealth and Great Britain had been very satisfactory, and the present pack would be cleared before next season.

It was proposed to add two large canning lines to the plant, and thus increase the capacity from a third to a half more tonnage. It was also proposed to double the accommodation at the girls' hostel to house the increased number of girls required. The proposed additions would mean an expenditure of from £20,000 to £24,000.

The good work of the General Manager (Mr. H. Williams), and the Factory Manager (Mr. Cameron) was the subject of appreciative reference.

### KYABRAM CANNERY.

The Kyabram Co-operative Fruit Preserving Co. Ltd., is making satisfactory progress. The cannery was established in 1922, the original capital being subscribed by orchardists, farmers and storekeepers of the district, the orchardists finding fully 60 per cent. of the subscribed capital. For the year ended August 31, 1925, the canned fruits produced in Kyabram totalled 2,417,976 cans, 2,355 tons of fruit having been processed and pulped.

The directors reported:—"Sales to the value of £78,272 were 85 per cent. greater than for the financial year 1923-4. The high quality of

fruit delivered, and the increased business transacted, have resulted in your company earning a moderate profit for the year, and we are confident that with a continuance of such conditions our progress is assured."

### FRUIT CANNING IN GREAT BRITAIN.

It was recently announced that the Ministry of Agriculture had set up a National Food Canning Council for the purpose of promoting the extension of food canning, especially fruit and vegetables, in Great Britain, and five committees were appointed to deal respectively with canning, can-makers, growers, research, and Parliamentary matters.

A request from Kent to establish a canning depot at Maidstone was receiving favorable consideration, according to the "Imperial Food Journal."

The latest statistics on the subject show that every year Great Britain spends about £7,000,000 upon imported fruit and vegetables, such as are grown in that country, and about 80 per cent. of that total is produced outside the British Empire.

One great advantage a British canning industry would possess would be in the manufacture of the cans.

"Great Britain has a wonderful range of fruits that can be brought to perfection in the open air, and a still wider range when fruits grown wholly or partly under glass are considered. Too often their sale scarcely pays for the costs of cultivation, mainly because it is apt to mature in gluts. Such canning as is already practised tends to circumvent seasonal difficulties, but there is not enough of it yet.

"The canning of vegetables has hardly been practised at all in Great Britain so far, and it offers a wide field for intensive developments."

Other journals are less optimistic.

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—CHEQUES WEEKLY—

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And WESTERN MARKET.

## GRAFTING GRAPES.

**Novel Method of Propagation Increases Yield and Improves Quality.**

Propagating Grapes by grafting desirable varieties on hardy root stocks has decided advantages over the usual method of propagation, chief among which are greatly improved quality of fruit and increased yield, says the Grape specialist of the New York State Agricultural Experiment Station, who has been conducting experiments with grafted Grapes for the past several years (writes the "American Nurseryman").

Such excellent varieties of American Grapes as Delaware, Campbell, Niagara, Concord, Iona, Catawba, etc., have certain defects which detract from their value as commercial possibilities, say this authority. Some of them set more fruit than they can mature; some are erratic in their bearing habits and are over-sensitive to soil conditions; while some have the "off-year" habit to a marked extent or tend to "run-out" or deteriorate in yield and quality. Although grafting is not a cure-all, many of these defects have been overcome by grafting these varieties on hardy root stocks, declares the station specialist.

Clinton, Riparia Gloire, and Rupes-tris St. George were used as root stocks in the station experiments and the standard varieties bench grafted on them by the whip-and-tongue method. Records have now been obtained for a sufficiently long time to show that American Grapes can be materially improved in quality, that yields can be increased, and that more vigorous vines can be obtained by bench-grafting desirable varieties on suitable stocks.

The cost of grafting is a serious handicap to the method coming into general use. Indications are, however, that cheaper methods will soon follow and in the meantime Grape growers are urged to give the method a trial on a small scale.

**CALIFORNIA DRIED FRUIT TONNAGES.**

The 1925 production of dried fruits in California, as given by the Dried Fruits Association of that State, is shown in the following table, which also shows the production (in tons) for each of the years 1922 to 1925:—

| Variety.           | 1922.   |
|--------------------|---------|
| Apricots . . . . . | 15,500  |
| Apples . . . . .   | 10,500  |
| Figs . . . . .     | 10,950  |
| Peaches . . . . .  | 28,000  |
| Pears . . . . .    | 5,000   |
| Prunes . . . . .   | 132,000 |
| Raisins . . . . .  | 235,000 |

**To vine growers**

**Potash pays when applied to vines for wine or fruit. The best form is**



**Apply 1 cwt. per acre with other artificials and gather**

**Bigger crops,  
Larger bunches,  
Sweeter grapes;**

**also grow healthier and more vigorous vines.**

**For prices apply to your fertiliser agent.**

**Insist on "Sun Brand."**

**TREE STOCKS FOR N.Z.**

The suitability of the Apricot trees grown in Australia was demonstrated this year when many of the Otago growers made their purchases from the Commonwealth. About 50 acres of new trees were planted out, the bulk of these being Apricots, in the production of which the district excels. Although certain growers have been endeavouring to select reliable nursery stock in Otago, there are many who prefer the Australian trees, which appear to give general satisfaction.

| 1923.      | 1924.      | 1925.   |
|------------|------------|---------|
| 30,000 ..  | 16,000 ..  | 17,012  |
| 9,500 ..   | 10,000 ..  | 5,755   |
| 5,500 ..   | 8,500 ..   | 9,613   |
| 26,000 ..  | 24,500 ..  | 16,170  |
| 2,000 ..   | 3,150 ..   | 3,504   |
| 131,000 .. | 139,000 .. | 145,932 |
| 290,000 .. | 150,000 .. | 219,285 |

**AUSTRALIAN PASSION FRUIT AND CANNING CO. LTD.**

Our Sydney office is in receipt of a prospectus of the Australian Passion Fruit and Canning Company Limited. The company offers for public subscription, 10,000 £1 preference shares and 10,000 £1 ordinary shares. They have agreed to take over from the vendor syndicate certain buildings, plant, stock, formulae, and other assets, and will extend their Passion Fruit, candied peel, Lemon butter, fruit salad and kindred lines, for which there is an ever increasing demand. It is also proposed to devote special attention to both local and overseas markets for Passion Fruit pulp. A large turnover can reasonably be expected from the manufacture and sale of this product, which as yet, is only in its infancy.





## Now is the time fowls specially need help

**T**HERE are still six weeks at least of very cold weather to get through—weeks during which the westerlies will blow their fiercest. It is really a dangerous time for poultry, for with the natural tendency towards greater egg-production at this time of the year, fowls find it harder to stand up against the biting weather. It is much easier for a fowl that is not laying to maintain its strength and health than one who is busily engaged laying eggs every day. Now is the time they specially need help in the form of a natural tonic; help which will enable them to keep on laying throughout the remaining weeks of cold weather, and which will at the same time have them in right good fettle for "peak" performances of the Spring. Karswood Poultry Spice (which contains dried and ground insects) is what they need, because it is the most natural of all tonics.

In support of the claims here made, and as evidence of how the weather at this time of the year will affect egg-production, we quote the following testimonial written on the 28th July last year:

### "Used It for Years."

Dear Sirs,—

I am a firm believer in Karswood Poultry Spice, as I used it for years in England, and while there I made £2 profit per month from 27 hens, and that was through Karswood Poultry Spice.

—Yours respectfully,

(Sgd.) T. J. BARBER.

Molonglo Settlement, Queanbeyan, N.S.W.

### "Will Never Be Without It."

Dear Sirs,—

I have been a user of Karswood Poultry Spice for some time, and cannot speak too highly of it, both as a tonic and egg producer. I have made several experiments with this

Spice, and am convinced that it increases the egg production by a big percentage. A short time ago I had a flock of 80 pullets laying nicely, but was not at the time using your Spice, owing to being unable to obtain it locally. A very severe change of weather came on, with the result that my pullets practically stopped laying. I immediately obtained a supply of Karswood, with the result that the whole flock was again in full swing within three weeks. I think the best recommendation I can give Karswood is by stating that I will never be caught again without a supply on hand. You are at liberty to use this as you wish.

(Sgd.) Miss J. M. FOWLES.

Yarragon.

### "Full Endorsement."

Dear Sirs,—

In the interests of breeders and poultry keepers generally, I feel constrained to briefly state the result of my experience with your Karswood Poultry Spice.

During the past six months I have supplied this product to some hundreds of my customers, and find that their testimony of the excellent results occurring from its use is almost unanimous. The evidence thus obtained has borne out in a most complete and convincing way, the correctness and truth of every claim that has been made for Karswood Spice; and with the full endorsement of personal experience it is my belief that Karswood Spice will prove the most valuable aid to modern culture yet introduced.

(Sgd.) W. W. C. CARTER

(Late with A. Hart, Chief Poultry Expert, Dept. of Agriculture, Vic.).

### Make This Test.

Go to your local grocer, store-keeper, or produce dealer. Get a 1/- packet of Karswood Poultry Spice, and give it to half-a-dozen of your birds, in accordance with the directions on the packet. Do not expect immediate results—Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

### Note the Economy.

- 1/- packet supplies 20 hens for 16 days.
- 2/- packet supplies 20 hens for 32 days.
- 13/- (7lb. tin) supplies 140 hens for 32 days.

### Supplies.

Karswood Poultry Spice is obtainable from all stores and poultry food suppliers at the following standard prices;  $\frac{1}{2}$  lb. packet, Price 1/-, 1lb packet, Price 2/-, 7lb. tin, Price 13/-, 14lb. tin, Price, 25/-, 28lb. tin, Price 48/-.

If your local dealer cannot supply you, write direct to Henry Berry & Co. Pty. Ltd., Collins St., Melbourne, adding postage—6d. on  $\frac{1}{2}$  lb. packets, and 9d. on 1lb. packets to the above prices.



## POULTRY NOTES.

## Success in Breeding.

**S**UCCESS in chicken rearing depends not so much upon the number of birds that reach the adult stage, as upon the quality of them. Don't waste feed and time in rearing to maturity stunted, deformed or physically weak chicks.

If the young pullets are intended for the production of eggs, only those which have made steady growth right from chickenhood should be retained, for any that are stunted, though they may be the progeny of pedigreed laying stock, will turn out profitless.

However good parent stock may be, there will always be a few weeds reared where large numbers are concerned, and if these—however few—are allowed to remain uncultured, their seed will have a disastrous effect upon the future generations. It is only by a rigid system of culling from the young stock, that a high standard of excellence can be maintained in the flock.

The wise breeder who weeds out and kills his inferior stock before it reaches the breeding pen, not only benefits himself, but others who might later introduce stock from his pens.

A few straight-boned, well developed birds that have been kept free of sickness, and reared under the best conditions, will form a better foundation for future operations than a host of youngsters showing stunted growth or bearing physical defects.

A few serious, though sometimes common defects amongst chicks which should be guarded against and eradicated by culling are, leg weakness, stunted growth, roach back, wry-tail, twisted neck, crooked toes, feather disease, crooked breast, and general debility.

Birds so affected should not be given room in the poultry yard.

From a financial standpoint, the rearing of weak or deformed chickens is unsound, as it means a waste of good food, and this is too costly an item—especially in these days—for the dieting of anything but the most promising stock.

It is only by annually weeding out physically defective and surplus young stock that a healthy strain of fowls can be established.

## REMINDERS FOR AUGUST.

Keep the chickens growing.

Provide plenty of green stuff.

Force your early hatched cockerels, and catch late November markets. It will pay you.

**Feeding Advice.**—If you want feathers, feed heavily. If you want flesh, feed widely; but if you want eggs, always feed a balanced ration.

If eggs are dirty, it is your fault. They are clean when the hen lays them.

Wet brooder floors mean leg-weak and cramped chicks. Hard balls often form under their toes and cause lameness.

When chicks can fly over two-foot wire netting they can generally look after themselves, provided they are fed regularly.

It is better to mix the wet mash with warm water than with cold, as the latter is more likely to cause diarrhoea. If warm milk or meat soup is obtainable, that is better still.

## POULTRY MARKET.

Sydney (13/7/26).

The month has been one of great interest to poultry breeders, values generally being excellent and in no way indicating that, whatever may be the case with eggs, good table poultry is not yet within coo-ee of over production. On one occasion, a decisive fall in hen values took place, but the recovery came as suddenly, and hen prices are now very good, White Leghorns of quality realising from 6/- to 7/6, and heavy colored sorts anything from 9/- to 12/- per pair. As usual in winter, grillers are dear, 8/- being a by no means uncommon rate. White Leghorn cockerels have had a great run of high figures and to-day yet further improved—11/6 being about the top score. Heavy colored cockerels have also been dear, and show signs of further improvement, not by way of prices beyond the present, 12/- to 15/-, but on better averages, which means that small and medium sorts are likely to sell better.

Muscovies throughout the month

## A REMARKABLE FACT!



IS THE ONLY SELLING FLOOR IN THE  
— STATE OF NEW SOUTH WALES —

entirely engaged in the disposal of

POULTRY KEEPER'S PRODUCE ONLY

We fight to maintain the price of the product we handle, and being disinterested in any other farm product, have no need to encourage price cutting to sell other lines. We sell on a commission basis only, and the greater the price realised the more it is to our advantage

Essentially a Poultry Farmer's Selling Floor

## The Australian Poultrymen's Trading Organisation

TURKEY, EGG AND POULTRY SALESMAN

7, 8 and 9 MUNICIPAL POULTRY MARKETS, ULTIMO  
ROAD, HAYMARKET. Phone: City 1154.

Crate and Egg Case Labels Posted on Application.



have been good property, and we would not be surprised to find yet higher prices ahead, for undoubtedly, supplies must be on a relatively small scale for some time to come.

This season, the turkey market has given no trouble, rates more than proving the rightness of our forecast of a high-priced season. At the moment we quote as a fair average rate, 1/1 per lb. for hens, and 1/4 per lb. live weight for gobblers of exportable quality, truly satisfactory rates.

For the coming month we forecast all-round continuing high values for all useful lines of table poultry.

**Prices per Pair:**—Squabs, 4/- to 4/9; pigeons, 2/3 to 2/7; grillers, 3/6 to 8/-; White Leghorn cockerels, 8/- to 11/6; colored cockerels, small, 8/6 to 9/6; medium, 10/- to 11/6; heavy, 12/- to 15/-; White Leghorn hens, 5/- to 7/6; colored hens, light, 5/6 to 6/6; medium, 7/- to 9/-; heavy, 9/6 to 12/2; Muscovy ducks, 7/- to 8/6; Muscovy drakes, 11/- to 14/6; turkey gobblers, 30/- to 58/-; turkey hens, 15/- to 26/6.—“A.P.T.O.” report.

#### THE HIVE IN WINTER.

A colony of bees in a good condition for successful wintering (writes the Senior Apiary Instructor of the N.S.W. Department of Agriculture) fulfils the following demands:—(a) A good cluster of bees raised under normal autumn conditions with a young queen in company; (b) an ample supply of good food; and (c) a good sound hive that is waterproof, and has walls of sufficient thickness to allow the warmth provided by the cluster of bees to be retained.

Some apiarists prefer to remove all the supers but one from the populous hives at the close of the season, wintering the weaker stocks in a single full-depth brood chamber. In this matter, however, much depends on the condition of the colony and the quantity of stores in the hives. In our climate, if there is a large force of bees, it does not generally appear to interfere with good wintering if a few supers containing honey are left on the hives; but where the hives are well stacked up with empty supers it is advisable to remove a sufficient

number to allow of greater comfort for the bees.

For a fair-sized colony, there should be 30 lb. or more of stores in the hives for winter; the bees will not consume much through the cool weather, but to induce a good start in the spring work a fair quantity of surplus is desirable. It must be remembered, however, that a colony with a small supply of stores during winter will economise in the use of the honey, and this will have an effect on their vitality. Weak stocks should always be wintered in small hives, and there is nothing like placing a good frame of honey on each side of the small cluster to keep the bees comfortable and compact. Colonies well established on from three to four frames, if conditions have been normal during the autumn, can usually be brought through the winter in good order if care is taken.



GIBBS, BRIGHT & CO.—See Page XIV

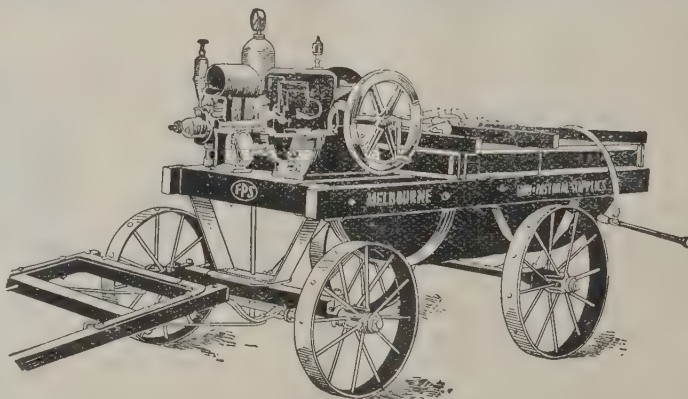
#### REILLY'S CENTRAL PRODUCE MART LTD.

Messrs. Reilly's Central Produce Mart Ltd., Dunedin, New Zealand, advise that pending the rebuilding of their store after the disastrous fire recently, they are located in three separate premises: the Otago Farmers, the Avery Scales Co., and opposite their old premises in Moray Place. They have received many expressions of goodwill and continued support throughout Australia and New Zealand.

#### TIRED OF MEDICINE.

A man walked into Dickson's Pharmacy at Geelong, and asked if A.M.S. really cured Indigestion. He had a weak stomach and a poor appetite, and loss of sleep and despondency had made him desperate. "I've tried almost everything!" he said dispiritedly, "and I've lost faith in the wonderful cures I read about." It was explained to him that A.M.S. was simply the juices of certain herbs, which helped the food to digest and tone up the stomach, and that his stomach was craving for these precious juices. He tried A.M.S., and it cured him. Why not try it yourself? All chemists 3/-, or by post 3/6 a bottle from T. A. Dickson, Chemist, Geelong.

## THE NEW HERCULES SPRAYER



Two guns at full 300 lbs. pressure—this is the achievement of the New HERCULES Sprayer, which consists of a 1½, 2½, or 3½ H.P. HERCULES Engine geared direct to a Metters' Power Pump.

If you have a Power Sprayer already, let us quote you for fitting our engine or pump, or both. Write at once for particulars, or apply for a FREE DEMONSTRATION in your own Orchard.

## THE FARM & PASTORAL SUPPLIES

PTY. LTD.

Machinery Merchants,

500 BOURKE STREET, MELBOURNE

## FRUIT TREES

CLEAN, HEALTHY,  
.. WELL-GROWN ..

All the Leading Varieties  
Correspondence Invited

J. W. LAWREY

Kingslake Nurseries YARRA GLEN, Vic.

**CO-OPERATIVE HONEY MARKET-  
ING.**

At the Conference of the Victorian Apiarists' Association, held in June, Mr. Lowsby, of the Gippsland and Northern Co-op. Co., defined the objects of the proposed co-operative marketing scheme as follows:—

(a) To combine all Victorian honey producers in a close co-operation to place their product; and (b) to bring the other States into line with similar organisations to that obtaining in New South Wales and contemplated in Victoria, so that the control of markets by the organised producers will not be affected by "dumping."

Mr. Lowsby said the total production of honey in Australia, averaging the figures of the last five years, was

**VICTORIA MARKET HOURS.**

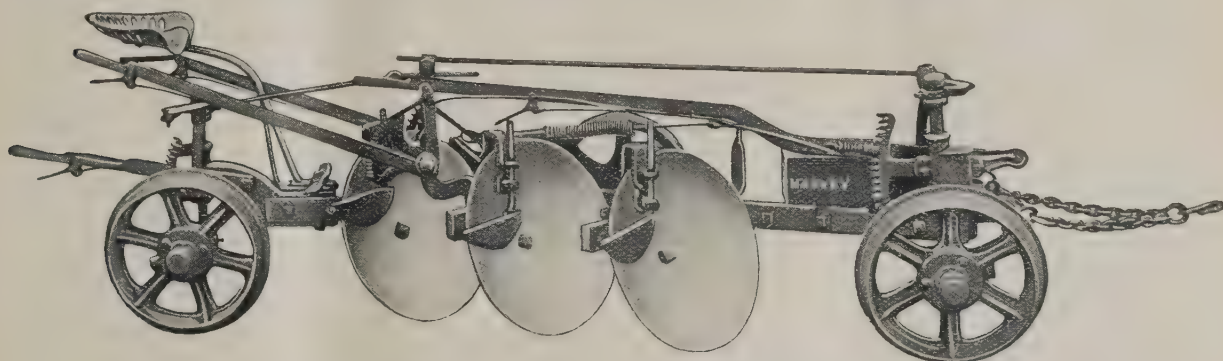
At the Portland Fruitgrowers' Convention, resolutions were passed recommending that the hour for opening sales at the Victoria Market should be altered from 4 a.m. to 6 a.m., that the law should be enforced preventing sales before 4 a.m., and that the wholesale market should be removed from the Western Market to the Victoria Market.

Mr. Geo. E. Mock, now reports that he visited the Market Gardeners' annual meeting and put these resolutions before them. They were strongly in favor of the law preventing the sale of produce, etc., before 4 a.m., but were not in favor of 6 o'clock opening instead of 4 o'clock. Mr. Mock and Mr. Aspinall conferred with

**N.Z. HONEY INDUSTRY.**

Speaking at the Annual Conference of the National Beekeepers' Association of New Zealand on June 9, Mr. J. Rentoul, Chairman of the Honey Control Board, said that in 1915 the exports of New Zealand honey totalled only ten tons. In 1925 the quantity totalled 780 tons. Owing to adverse weather conditions the output this year would not be as good as last year.

The Honey Control Board came into operation last year, and grading was carefully supervised. A levy of 1d. per lb. on export was charged for advertising.



Three-furrow Disc Plough manufactured by Mr. D. Harvey, Box Hill, Vic.

2,410 tons. To this total Victoria contributed 913 tons, New South Wales 600 tons, and South Australia 514 tons.

A further interstate conference is to be held in Western Australia shortly.

**SHEPPARTON PACKING SHED.**

Replying to criticism by shareholders, the Chairman of the Shepparton Orchard Products Co. (Packing Shed), Mr. A. H. Carver, stated that the directors had made themselves responsible for the funds to pull the business up from a very bad start. This had been done to such good purpose that the Government had not hesitated to make them an advance of £1000. During the season just ended £13,000 had been paid by the company for fruit, besides which the company had engaged in the sale of fruit cases, manures, spraying material, etc., to the fruitgrowers at prices far below what they would otherwise have cost, the total turnover having been about £20,000.

Shareholders expressed confidence in the management by a big majority.

the Superintendent of Markets (Mr. G. B. Minns) on the resolutions concerning the Victoria Market. Mr. Minns stated that he would enforce the 4 o'clock opening from August 1, and would bring the other resolutions favorably before the Committee.

**EXPORT OF WINE.**

The Minister for Customs stated recently in the House of Representatives that the export bounty had been refused on two consignments of wine, owing to its not being of the standard set by the Department. In future all wine will be inspected before export, and in such cases, not only will the bounty be refused, but export will be stopped.

The Minister also stated that 1,229,882 gallons of wine had been exported under the export bounty, and £233,460 had been paid in bounties since the Act came into operation in September, 1924. On 11,155 gallons the bounty had been refused.

## Fruit Trees For Sale

The attention of persons interested is invited to the fact that the Water Conservation and Irrigation Commission has at its Griffith Nursery, quantities of Levis Cling Peach trees, White Adriatic Fig trees and Almond trees, which are available for disposal. Quotes will be supplied on application being made to the Manager, M.I.A., Griffith, N.S.W., and reduced quotes will be given for large orders.

GEORGE J. EVATT, Commissioner  
Water Conservation and  
Irrigation Commission  
LEETON, N.S.W.



## SUBSCRIBERS' PAYMENTS

(Continued from Page 362.)

(June, '27), Gen. J. Heane (June, '30), R. Hutchinson (June, '27), C. H. Jackson (June, '26), S. B. Jameson (August, '26), G. P. B. Jackes (June, '26), J. Jardine (June, '26), James and Allwood (December, '28), W. E. James (June, '27), Johnson and Harfield (June, '27), H. C. Johnson (June, '27), A. L. Kelman (June, '26), F. H. Knappeler (June, '25), A. Kieselbach (June, '27), H. Kregor (June, '27), J. K. Knappstein (June, '27), G. E. Linton (June, '26), S. Lee (June, '26), G. R. Laffer (June, '26), E. A. Lasscock (June, '27), A. J. Leneham (June, '26), P. V. Lockey (June, '27), A. Lenne (June, '27), E. Livermore and Sons (June, '27), J. Lindfield (June, '27), H. T. Loveday (June, '27), Hop Lee and Co. (June, '27), John Moore (June, '27), Montville School of Arts (April, '26), F. H. Miles (June, '26), B. A. Martin and Son (June, '26), C. H. Martin (June, '27), W. E. Muspratt (June, '27), May Bros. (June, '27), J. W. Mattiski (April, '27), A. V. Mills (June, '27), J. L. Morgan (June, '27), R. Mays and Son (June, '27), Murray View Irrig. Co. (June, '27), H. W. Martindale (June, '26), H. W. Mitchell (June, '27), Mathews and Sons (June, '27), Moore Bros. (June, '28), Alex. Malcolm (June, '27), E. Morgan (June, '27), Mt. Barker Estate (February, '28), Milnera Co.-op. Fruit Co. (June, '27), R. D. McGowan (June, '26), F. McGlasson (June, '27), W. McGregor (June, '27), McKillop and Sons (June, '27), K. Neil (June, '26), F. Norsworthy (June, '26), F. Newport (June, '27), A. Nott (June, '27), J. A. Nairn (June, '27), C. J. Nash (June, '30), T. J. Owen (June, '27), P. Owen (June, '27), Producers' Markets Ltd. (June, '27), Pearce Bros. (June, '27), Pryde Bros. (June, '26), S. Priestly (June, '26), G. K. Pike (June, '26), Rob. Portwile (June, '25), E. J. Polkinghorne (November, '27), T. J. Peart (June, '26), E. C. Pratt (June, '27), Pitt Bros. (June, '27), Pattinson Bros. (June, '27), Seward Plush (June, '27), H. S. Peterson (June, '27), W. Pickles, Patterson and Co. Ltd. (June, '27), J. Porter (June, '27), T. M. Price (June, '27), Pearce and Lee (June, '26), Page Bros. (June, '27), E. B. Pixley (June, '27), O. E. K. Peterson (June, '27), J. B. Randall (June, '27), J. A. Parkes (June, '27), C. F. Richmond (June, '25), W. J. Rees (June, '26), J. D. Rock (June, '26), T. B. Robson (June, '26), W. J. Ross (June, '26), E. Robinson (February, '27), D. H. Ross (March, '27), Roberts and Co. (June, '27), A. B. Robin (June, '27), E. Rees (June, '27), J. B. Randall (June, '27), G. Roberts (June, '27), Ross, Reid Bros. (June, '27), S. G. Ritchie (June, '27), G. Robinson (June, '27), T. Robbins (June, '27), W. J. Rees (June, '27), P. Renn (June, '27), Renmark Fruit Growers Ltd. (June, '27), L. F. Rosen and Son (June, '27), G. W. Robinson (June, '27), Rosella Preserving Co. (June, '27), Dr. G. Soilleux (June, '27), J. F. E. Smith (June, '27), A. E. Stanford (June, '27), F. A. Simon (June, '26), R. Simpson (December, '25), J. and T. Swan (June, '26), F. S. Sproull (June, '26), Southern Queensland Fruitgrowers (June, '27), B. F. Sampson (June, '26), C. McD. Stuart (June, '26), W. F. Stephens (June, '26), G. Sheppard, Jun. (August, '26), Miss Stinson (June, '26), B. Shaw (February, '26), G. E. Sheather (June, '26), W. A. Smith (June, '26), M. Suckles (December, '26), J. Snowball (June, '26), S. Sandow (June, '27), L. M. Shoobridge (June, '28), Silbert, Sharp and Bishop (June, '27), Sagar (June, '27), C. Spencer (June, '27), T. Stansford (June, '26), L. B. Strother (June, '27), South Aust. Cool Stores (June, '27), Harry A. Simon (June, '27), J. Shaker (June, '27), A. E. Stephens (June, '27), J. Steven (June, '27), T. Sutton (June, '27), I. Serpell (June, '27), Shepparton Pres. Co. (June, '27), H. F. Scarlett (June, '27), H. M. Terry, June, '27), J. J. Tully (June, '27), Stephen Thompson (June, '26), H. Trevenor (June, '26), J. Taylor (June, '26), E. Taylor (June, '27), L. Turley (June, '27), J. Tait (June, '27), J. Thomas (June, '27), August Thiele (June, '31), F. Tucker (June, '27), Wagga Experiment

# The Fruit Trade

## Market Reports and News Items.

### BRITISH MARKETS.

This export season has been a record one as far as aggregate shipments are concerned, over 3,000,000 cases having been forwarded from Australia and New Zealand. Cable advices show, however, that financially the season has been disastrous. Mr. H. G. Colombie, Temple Court, Collins Street, Melbourne, has received word from his London principals, Messrs. M. Isaacs and Sons Ltd., dated June 9, in which they state:—"The official end of the strike was by no means the end of the trouble, as owing to the accumulation of cargoes here and the stocks in warehouses, we were quite unable to cope with the situation. The result is that cargoes have discharged one on top of the other, without sortation of marks, etc., and this entails a tremendous amount of delay in sorting and selling. Fortunately the City Emergency Committee was successful in diverting the "Port Dune-din" to Liverpool, and obtained the discharge of the "Horatius" London quantity in Hamburg. Both these cargoes sold comparatively well. It is not much use discussing plans for organising the business on better lines when on your side loadings are so badly distributed."

Messrs. MacGeorge and Jardine, Liverpool, writing to Mr. Colombie on June 8, said:—"Prices now, as you will gather from the market quotations and reports, are getting down to very low figures, and we fear that in a short time we shall be having deficit account sales. The low prices are caused partly by the heavy quantities of Apples arriving in the country so quickly that it is impossible to regulate the offerings, and also because the coal strike is making itself felt more and more every day. "The steamers have been arriving on top of each other to such an extent that it has been impossible to do any-

Farm (June, '27), E. E. Wagstaff (June, '27), G. H. Whitby (June, '25), Stan. Whythes (June, '26), Walters and Co. (June, '26), Whiting Bros. (June, '27), T. G. Williams (June, '26), John White (June, '27), F. R. Williams (June, '26), F. Walker (June, '27), A. W. Wise (June, '27), J. H. Welly (June, '26), W. J. Williamson (June, '27), W. Wightman (June, '27), F. Witherby (June, '28), Stan. Walker (June, '26), B. Watson (June, '27), E. R. Ward (June, '27), G. L. Wishart (June, '27), Est. G. Western (June, '27), Yenda Producers (June, '26), Young Bros. (June, '27), Ath. Young (June, '27), E. V. Yeomans (June, '27), W. Young (June, '27).

thing but to continue selling as hard as we could, otherwise we should have had thousands of cases of Apples lying about deteriorating.

### Liverpool (9/6/26).

Messrs. J. C. Houghton and Co., reported a distinct feeling of depression in the market. This was quite apart from the influences of quality, condition and supply, and would only be attributed to the far-reaching consequences of the continued coal strike.

Tasmanian—Cleo., 7/6 to 12/6; N.Y.P., 6/3 to 11/6; Jon., 7/6 to 11/9; F.C.P., 7/6 to 11/6; S.T.P., 7/- to 10/9; S.P.M., 7/- to 10/6. Victorian—Jon., 6/- to 12/6; Munro, 7/- to 9/- West Australian—S.P.M., 9/- to 10/9; Granny Smith, 14/3 to 14/9; Dunns, 10/- to 11/9.

Australian Pears presented a nice appearance, and rates paid were disappointing, the total offering being so moderate, and condition mainly good.

Tasmanian—V.W., 8/9 to 13/3 per case; V.W., 5/- to 8/3 per half-case; B.A., 12/6 to 15/- per case; N.A.P., 9/- to 14/- West Australian—Nelis, 21/- per case; 13/- to 16/- per half-case; Keiffer, 3/3 to 3/6 per tray.

### London (20/7/26).

Apples shipped by the "Hobson's Bay" realised the following prices:—Tasmanian Stormers, 6/3 to 11/-; Granny Smiths, 8/6 to 10/6.

### SALES IN HOLLAND.

Algemeene Vruchten Import Maatschappij, Amsterdam, reported a transhipment of Australian Apples sold at following prices:—Cleopatra, 17/6; Dunn's Favorite, 14/- to 16/-; Dunns, 15/- to 18/-; Munro, 15/- to 16/-; Winter Pearmain, 16/6 to 18/-; Jonathans, 14/- to 18/3.

The prices indicate that there is a good demand for Australasian Apples in Holland, and the firm recommended making regular consignments in the coming season.

### GRANNY SMITHS FOR HAMBURG.

Messrs. P. Astheimer and Sohn, Hamburg, report Granny Smith Apples, per s.s. "Abbekirk," were of splendid quality and realised good prices, 18 m. per case for all sizes.

"Granny Smith" (they state) "is a good variety and although not so much known yet amongst the public, we feel sure this Apple will steadily gain in favor. In our opinion this Apple should, during the second half of the season, replace the Cleos., as we think it is a good keeper. The fruit is certainly very attractive."

## Australasian Markets

### New South Wales.

Sydney (22/7/26).

Mr. F. Chilton, City Fruit Markets, Haymarket, Sydney, reported as follows:—

Queensland Fruits.—Bananas, 18/- to 34/- per case; Pines, smoothleaf, 7/- to 10/-; Custard Apples, 4/- to 7/- per quarter case; Tomatoes (Nth. Qld.), 3/- to 8/- per half case.

New South Wales Fruits.—Bananas, 18 to 34/- per case; Lemons, yellow, 4/- to 8/- per bushel case; Oranges, 4/- to 8/-; Navel, 7/- to 12/-; Mandarins, Emperor, 7/- to 12/6; Eating Apples, R.B., 8/- to 12/-; Granny Smith, 9/- to 14/-; Grape Fruit, Shadocks, etc., 4/- to 8/-; Passions, 10/- to 25/- per half case.

Victorian Fruits.—Apples, Jon., 6/- to 10/- per bushel case; Pears, Jos., 12/- to 17/-; B.B., 8/- to 12/-; P.T., 11/- to 15/-.

Tasmanian Fruits.—Apples, S.P.M., 6/- to 11/- per bushel case; F.C., 6/- to 9/-; Jonathan, 6/- to 11/-; Cleo., 6/- to 10/-; Del., 6/- to 10/-; C.P.M., 6/- to 12/-; Dem., 7/- to 13/-; S.T.P., 3/6 to 6/-; Pears, W.N., 3/6 to 7/- per half case; W.C., 3/- to 7/6.

Choice red Apples have advanced in price in consequence of lighter shipments from Tasmania this week; small and medium quality, however, are still difficult to sell. Pines are heavily supplied and prices have eased considerably. A good demand exists for choice clean colored Lemons and Mandarins.

### Victoria.

Melbourne (24/7/26).

Quotations on July 24 were as follows:—Per case: Apples, Jonathan, choice, 9/- to 11/-; other descriptions, from 6/- to 9/-; Five Crowns, 8/- to 11/-; other cooking varieties, 4/6 to 8/6; Pears, choice, dessert, 8/- to 11/-; Bananas, choice, — to 28/-; others, from 10/-; Pineapples, Queen, 10/- to 13/-; Passion Fruit, Victorian, 28/-; special, higher; others, 14/- to 17/-; Citrus Fruits:—Navel Oranges, A quality, special, 9/- to 14/-; B and C grades, 1/- to 2/- lower, and standard grades, 1/- less; Common Oranges, New South Wales, 6/- to 8/-; Victorian, 8/- to 11/-; Mandarins, A quality, large, 14/- to 16/-; B grade, 12/- to 15/-; small and medium, 9/- to 13/-; Lemons, the market was oversupplied, prices ranged from 6/- to 8/-.

### Tasmania.

Hobart (17/7/26).

S.P.M., choice, 6/9 to 7/1; good, 6/- to 6/6; medium quality, 4/6 to 5/9; M.Y.P., good, 6/9 to 6/10; fair, 5/6 to 6/-; F.C., fair, 5/- to 5/3; medium, 3/6 to 3/9; Jon., fair, 5/6 to 6/-; P.B., choice, 6/6 to 6/7; medium, to 5/-; M.F., good, to 5/1; C.P.M., small (colored), to 5/3.

### Queensland.

Brisbane (20/7/26).

Lemons, prime, 3/- to 4/-; others, 2/6 to 3/- a half case; 9/- to 10/- per bushel case; Oranges, 4/- to 8/-; Navel, 6/- to 13/-; Mandarins, 6/- to 11/-; Passion Fruit, 5/- to 12/- per half-bushel case; Pineapples, rough leaf, prime, 2/- to 3/-; others, 6d. to 2/- per doz; 3/- to 5/6 per case; smooth leaf, prime, 5/- to 7/-; others, 3/- to 5/- per case, 2/6 to 5/- per doz.

### Western Australia.

Perth (17/7/26).

Apples, Dunn's, prime, dump cases,

10/- to 14/-; flat cases, 5/6 to 8/-; other dumps, 6/6 to 8/6; Granny Smiths, prime, dumps, 13/- to 16/6; flats, 10/- to 12/6; Yates, prime, dumps, 10/- to 14/6; flats, 6/- to 10/6; other dumps, 6/- to 9/-; Romes, dumps, 8/- to 13/-; flats, 8/-; Dohertys, prime, dumps, 10/- to 14/-; flats, 5/- to 10/-; Rokewoods, 5/- to 13/3; flats, 5/- to 8/-; Oranges, flats, 3/- to 6/-; Navel, dumps, 7/- to 12/6; flats, 5/- to 8/-; Mandarins, flats, 7/- to 14/-; Lemons, flats, 2/6 to 6/3; Passion Fruits, small cases, 6/- to 13/9.

### South Australia.

Adelaide (22/7/26).

Apples, eating, 6/- to 8/- per case; cooking, 5/- to 6/-; Lemons, 6/-; Oranges, common, 7/-; Mandarin, 13/- to 15/-; Navel, 10/- to 12/-; Poorman, 5/-; Passion Fruit, 32/- to 34/-; Pears, eating, 10/-; cooking, 7/-.

### New Zealand.

Dunedin (8/7/26).

Reilly's Central Produce Mart Ltd., reported an excellent demand for choice dessert fruit, particularly Navel and Tahiti Oranges, Bananas, choice dessert Apples and Pears. Prices were as follows:—Pears, choice desserts to 3½d.; cooking, 2½d.; Bananas, ripe, to 35/-; Pines, 27/-; Apples, Delicious, to 13/-; Sturmers, to 11/-; Jonathans, to 9/6; other desserts, 5/- to 7/6; choice cookers, to 7/6; Lemons, to 26/-; Mandarins, 27/6; Passions, 24/-; Oranges, Rarotongan repacks, to 25/-; Poorman, to 14/-; Sydney Navels, 27/6.

### CITRUS FRUITS.

The V.C.C.A. market representative reports as follows for the week ending July 23, 1926:—The severe cold weather has had a depressing influence on the sale of Citrus fruits generally, although stocks were reduced

## FRUIT SHIPMENTS — TO NEW ZEALAND

### REILLY'S CENTRAL PRODUCE MART LTD., DUNEDIN

advise Growers of CHOICE FRUITS to ship to Dunedin

REILLY'S anticipate a keen demand for all lines of choice Fruit arriving on this market between the months of July and December.

Cable or write to Reilly's, Dunedin. Codes used—BENTLEY'S, MARCONI'S, WESTERN UNION, A B C 5th & 6th Ed.

REILLY'S GUARANTEE FAITHFUL SERVICE TO ALL CONSIGNORS.

REILLY'S offer Fruitgrowers their faithful service and will be pleased to advise Fruit Shippers the probable prices available and prospects of making suitable sales.



considerably as a result of light consignments. There was still a fair carry-over after this morning's sales were completed. We advise growers to market their fruit in small quantities only for the next month, as we anticipate a much better demand during the spring. Mandarins are selling well owing to light supplies. Prices were as follows:—Navel Oranges, A quality, special grade, 9/- to 14/-; B quality, special grade, 8/- to 13/-; C quality, special grade, 7/- to 12/-; Standard and Plain, from 1/- to 2/- lower; Common Oranges, New South Wales, 6/- to 8/-; Victoria and South Australia, 8/- to 11/-; Mandarins, A grade, special large, 14/- to 16/-; B grade, special large, 13/- to 15/-; small to medium, 9/- to 12/-; Lemons, 6/- to 8/-.

**"SULFINETTE" LIME SULPHUR SOLUTION SPRAY.**

Manufactured by the proprietors of Cooper's Sheep Dip.

Superior to other forms of Lime Sulphur owing to a special process of manufacture. It contains 25 per cent. sulphur in solution. Possesses extraordinary wetting and covering powers. Its fungicidal and insecticidal properties are unequalled. Prices: 40 gallon casks, 1/9 per gallon; 5 gallon drums, 2/3 per gallon.

Victorian Agents: NEWELL & CO. PTY. LTD., 189 King Street, Melbourne.

**ATOMOL DUSTS LTD.**

A company recently formed in Adelaide under the name of Atomol Dusts Ltd., has taken up the production of dusting powders on scientific lines. One of their products is a wettable sulphur (98 per cent pure sulphur), which, it is stated, can be safely combined with any of the copper sprays, or arsenate of lead, and which may be used right through the summer without fear of burning. The particles are extremely fine, and will keep in suspension in water with the ordinary agitation of the spraying plant.

The company has also secured the sole Australian agency for the Root Dusting Machines, which are said to give splendid results. Special features are that the gun requires no lubrication; is light and easy to carry and operate; the discharge tube can be raised or lowered according to the height of the plants; distributes the dust evenly; can be adjusted instantly to discharge from 1 to 20 lbs. of poison per acre; detachable rubber nozzle that will not corrode, bend, or rust. These machines will be available shortly. Pamphlet on the control of pests may be obtained from Messrs. Atomol Dusts Ltd., Dum-

phries Place, off Gilles Street, Adelaide, whose advertisement appears on page 386 of this issue.

**PRICE OF THE IMPROVED "PENANG" SIZER.**

Owing to a typographical error in the advertisement for the Lightning Fruit Grader Co., which appeared in our July edition, the cash price of packing-bins for the Improved "Penang" Sizer appeared at £8 extra. This should have read £8/10/- extra.

**AGENTS' DEDUCTION FOR ADVERTISING.**

We are advised by Messrs. Geo. Monro Ltd., Covent Garden, through their Australian agent, Mr. H. Dakin, Macquarie Place, Sydney, that this year they are falling into line with other firms in deducting 3d. per case on account of advertising, instead of 1d. per case as heretofore. An extensive advertising campaign is being carried out in regard to Australian fruit, to which the Commonwealth Government and the fruit trade are contributing on a pound for pound basis. This campaign, it is stated, is essential after the "arsenic scare," to re-establish confidence in the minds of the buying public.

# **This Sprayer Was Designed By Orchardists**

*No wonder it so Satisfactorily meets the needs of Spraying*

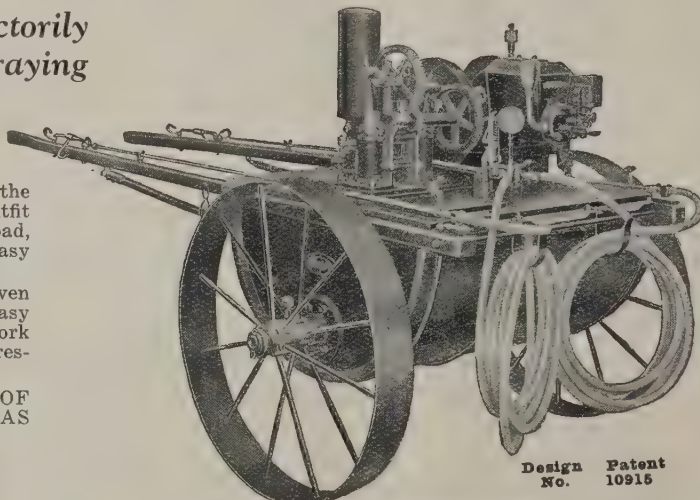
Experienced Orchardists supplied the ideas upon which the Cooper Outfit was designed. They specified: Broad, High Wheels, for safety and easy draught.

Low-down, semi-circular Vat for even weight on axle, and for quick easy filling. Pump and engine to work consistently and give plenty of pressure.

YOU GET THE BENEFIT OF THESE ORCHARDISTS' IDEAS WHEN YOU USE

*Cooper*

**"PERFECT BALANCE" SPRAYER**

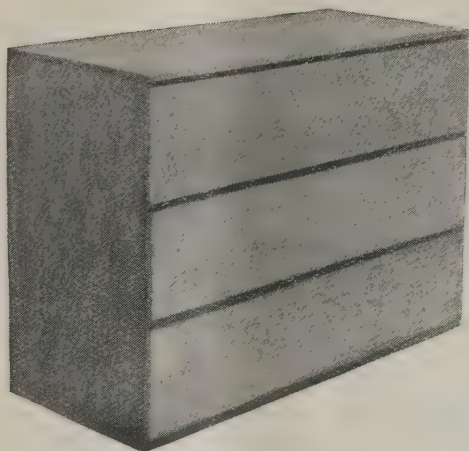


Design Patent  
No. 10916

**Cooper Engineering Co. Ltd.**

350-358 SPENCER ST., MELBOURNE  
129-131 SUSSEX STREET, SYDNEY

The Australasian Implement and House Furnishing Co.,  
North Terrace, Adelaide



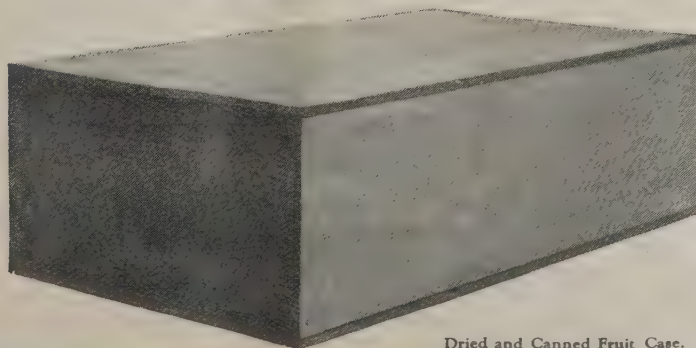
Australian Apple and Citrus Dump Bushel Case.

## SOME ADVANTAGES IN FAVOR OF IMPORTED CASES

- (1) Full drawback of duty allowed on all cases exported.
- (2) 1/3rd less freight than on Hardwood cases.
- (3) 25% rebate on rail freight for full trucks.
- (4) All timber cut to exact sizes making it an easy matter to assemble a symmetrical case.
- (5) Every piece of timber fit and ready for use, thereby eliminating waste.
- (6) Can be supplied in shooks or made up and branded.

Particulars from the Largest Importers

# Overseas & Interstate Trading Co. Ltd.



Dried and Canned Fruit Case.

## SOFTWOOD CASES

(IMPORTED)

*Cheaper than hardwood if exported.*

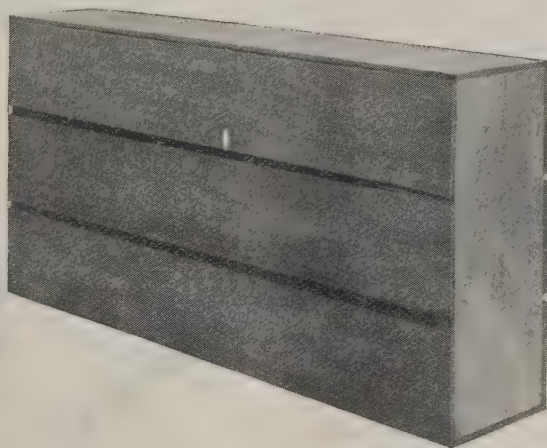
*Cut to Australian Standard Sizes*

DUMP BUSHEL with one piece top and three equal piece side

UPRIGHT BUSHEL with one piece top and three equal piece side

DRIED FRUIT CASE with one piece side and two equal pieces tops and bottoms

CANNED FRUIT with one piece side and two piece tops and bottoms



Upright Bushel Case with Centre Partition.

22 Market Street,  
Melbourne

Phone Central 9110

Also  
King William Street,  
ADELAIDE



## ATOMOL DUSTS LIMITED

MANUFACTURERS OF DUSTING MATERIALS TO BE USED AS INSECTICIDES AND FUNGICIDES ON ALL PLANT LIFE.



**ATOMOL DUSTS LIMITED** is an embodiment of a movement for the practical application of scientific discoveries in the realm of Plant Life and the fulfilment of requirements in accordance with the highest standard that scientific research is able to provide.

Sulphur being the chief active ingredient in nearly all the dusting powders, we are making a specialty of this product. Our sulphur is reduced to the finest possible divided state. This product has been specially designed for dusting purposes. We have also produced a wettable sulphur (98 per cent. pure sulphur), and this can be safely combined with any of the copper sprays or arsenate of lead. The particles are extremely fine, and will keep in suspension in water with the ordinary agitation of the spraying plant. This sulphur can be used throughout summer without the slightest fear of any kind of burning, or without any of the objectionable features associated with the combination of lime-sulphur and arsenate of lead.

We will be pleased to send samples of our sulphur products to any address in the Commonwealth.

Our attention is now concentrated to the diseases of the Tomato, Potato, and dormant pests.

Write for our Pamphlet on the control of these pests.

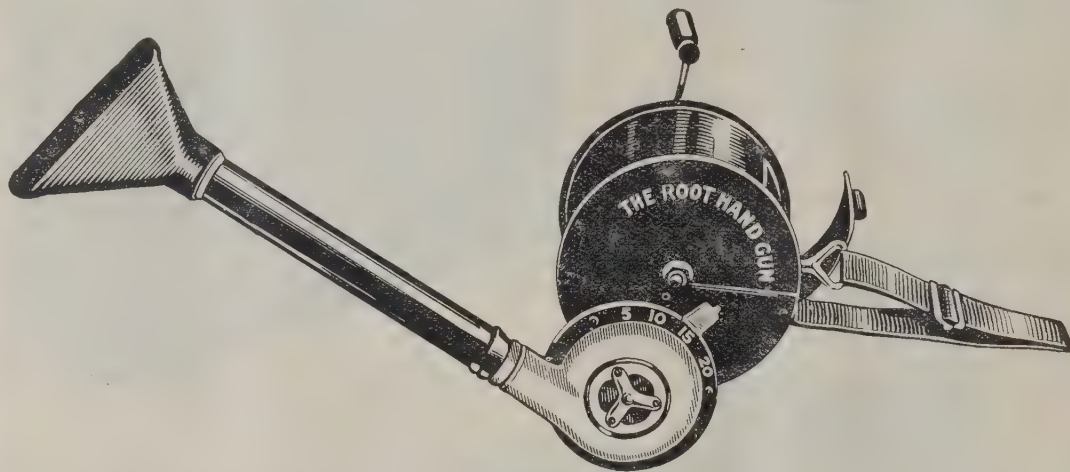
Should you favour us with an inquiry, we would be pleased to send you the particulars of any Dusts you may be interested in.

### MECHANICAL APPLIANCES.

#### SOLE DISTRIBUTORS OF ROOT DUSTING MACHINES FOR AUSTRALIA.

In addition to the dusting materials, we have secured the sole Australian agency for what is easily the best available dusting appliance. It is the only machine that has a positive feeding device. **These machines are patented throughout the Commonwealth**, and cannot be copied. They consist of three (3) types:—Saddle, Tractor, Hand Dust Gun, and a smaller one for the Home Gardener.

**"ROOT DUSTERS"** are the latest development in dusting machinery. The heart of any dusting machine is in the feeding mechanism. The **IMPROVED ROOT FEED** is entirely new, and gives splendid results. This Gun can be adjusted to distribute as low as 1 pound of poison to the acre and **DO IT RIGHT**.



### SPECIAL ATTENTION IS DIRECTED TO THE ROOT HAND GUN.

- 1.—It operates easier than any hand duster on the market.
- 2.—Runs on ball bearings packed in grease.
- 3.—The gears are bronze (wide flanged), and also packed in grease.
- 4.—The gun requires no lubrication during its life.
- 5.—Perfect balance—easy to carry and operate. Weighs only 9½ pounds with hopper empty.
- 6.—The discharge tube can be raised or lowered for high or low plants. This feature always permits the operator to stand in an upright and comfortable position.
- 7.—Hopper will carry from 7 to 10 pounds of poison depending on density.
- 8.—Does not discharge poison in "chunks" and "gobs," but thoroughly breaks it up and dusts it evenly and uniformly.
- 9.—CAN BE ADJUSTED INSTANTLY TO DISCHARGE ANYWHERE FROM ONE TO TWENTY POUNDS OF POISON PER ACRE. THIS FEATURE IS A WONDERFUL IMPROVEMENT IN HAND DUSTERS.
- 10.—Can be taken apart and easily repaired.
- 11.—Built to stand hard knocks and rough usage.
- 12.—The detachable rubber nozzle will not corrode, bend, or rust. The nozzle of a hand duster receives more abuse than any other part of the gun.
- 13.—The only Hand Gun that permits swinging of the discharge tube from in front to the rear of the operator.

**GROWERS ARE STRONGLY ADVISED TO DELAY THE PURCHASE OF ANY MECHANICAL APPLIANCES UNTIL THESE UP-TO-DATE MACHINES ARE AVAILABLE. THEY ARE DUE IN A FEW WEEK'S TIME.**

## ATOMOL DUSTS LIMITED,

Dumphries Place, off Gilles Street,  
ADELAIDE, S.A.

## The Ladies' Page.

### Furnishing the Home.

At a meeting of the Kalangadoo Women's Branch of the South Australian Agricultural Bureau, reported in the S.A. "Journal of Agriculture," for March, Mrs. Tucker read a paper dealing with this subject, in which she said the first point to receive consideration in the furnishing of a home was the amount of money that was available for the purchase of the various articles.

Unless circumstances warranted it, the house should not be too large, because the upkeep was expensive and

unnecessary furnishing had to be done. Rooms that were not used, required just as much care and attention as rooms that were in daily occupation.

#### Wall Decoration.

New paper should not be pasted over old. If possible, the color of the paper should form a suitable background for the furniture. In small rooms the use of large-patterned wall-paper should be avoided. For low rooms, a striped paper would have the tendency to give the room a higher appearance. At the present time, the use of wall papers was not generally in vogue, but daintily colored borderings on white walls were often noticed, and should prove a guide to the housewife when choosing her furniture.

All table covers, carpets, and curtains should form a pleasing contrast to the paper. The rooms should not be overcrowded with furniture. Upholstered furniture was difficult to keep clean. Unless the suite was covered with leather, washing covers should be used on all the pieces. A very pleasing effect would be obtained if a different coloring were used for each room.

#### Linoleums

should always be used for floor coverings in bedrooms, so that dust could be easily gathered. Washing curtains should be used at the win-

dows, and a few good pictures hung on the walls. Cheap and pale green paints should not be used on the bedroom walls.

The dining-room should be made the most pleasant room in the house, and leather-covered furniture should be chosen. If funds permitted, a carpet could be laid down, but good linoleum to match the furniture could also be used for a floor covering. A good sideboard, extension table, and a few pictures should prove sufficient furniture for that room.

The lounge should be a comfortable room for the parents and children. Large armchairs and settees were favored, and the musical instruments, games, etc., could be placed in this room for amusement during the evenings.

#### The writer considered the kitchen

and bathroom to be the two most important rooms in the house. If possible, walls should be painted so that they could be easily washed. White, with contrasting colors of blue, green, and black, would give the rooms a clean and pleasing appearance. If sufficient money were available, inlaid check linoleum to match the kitchen or bathroom could be laid down.

The verandah could be used during the summer, if sea-grass chairs, a lounge, and a few occasional tables for cards, were provided. Wire doors and screens should be fitted, otherwise flies would soon undo all that had been done to beautify the interior of the house.

## "GREEN CROSS" Arsenate of Lead

### ... Powder ...

For  
Wet Spraying or Dry Dusting

DOES NOT BURN  
or  
WASH OFF.

Mixes instantly and remains  
uniformly suspended in Spray-  
ing Tank.

1 lb. of Green Cross Powder  
is equal to from 2 to 3 lb. of  
the best Arsenate of Lead  
Paste.

25 lb. Drums . . . 1/10 per lb.  
50 lb. " . . . 1/9 1/2 " "  
100 lb. " . . . 1/9 " "  
200 lb. Barrels . . . 1/8 " "

**Welch Perrin & Co.**  
Pty. Ltd.

48-56 QUEEN'S BRIDGE ST.,  
SOUTH MELBOURNE.

ESTABLISHED 1891

**AUG. STIER**  
FRUIT BROKER,  
Fruchhof, HAMBURG

Telegraphic Address: FRUTERO, Hamburg.  
Consignments Solicited

Agents for Victoria and South Australia:—

**J. B. MILLS & CO., 9 Queen St., Melb.**

Tasmanian Representatives:

**SILBERT SHARP & DAVIES**

Clyde Street, Hobart, Tasmania



## NOT ENOUGH FRUIT EATEN!

### Value of Raisins.

"Patients who suffer from gall-stones, kidney stones, and some forms of valvular disease of the heart and chronic bronchitis, can generally give a history of unbalanced diet with an insufficiency of fruit," writes Dr. M. E. Deeks, in the "Fortnightly Review" for August.

Such eminent authorities as Dr. Josiah Oldfield, London, and Dr. Geo. E. Payne Philpots, D.D.S., of Melbourne, have frequently stated that Raisins contain properties that are extremely beneficial in cases of bronchitis and troubles of that nature.

Speaking at a recent luncheon in Melbourne, Dr. Philpots said that the production of dried fruits and Raisins had a vital relationship to the health of the nation.

Constipation was one of the most prevalent disorders, particularly amongst children. This trouble could be overcome without the constant use of cathartics, oils, salts, or similar temporary reliefs.

If Raisins were eaten daily, preferably first thing in the morning, they would prove of great value as a corrective on behalf of other foods that fail. Their action was gently laxative,

and their fragrant juices stimulating the digestive organs would make all the difference between lethargic toleration of food and active absorption and utilisation of it.

Dr. Philpots also stated that 95 per cent. of school children in Australia to-day suffered from dental decay, which could be prevented by fruit of the fibrous sort, such as Apples or Raisins, which had to be chewed and promoted a cleansing flow of saliva.

The reason why Raisins were so beneficial in cases of bronchitis trouble was because of their high sugar content. Raisins contain 75 per cent. pure Grape sugar, which was highly nutritious and perfectly wholesome.

This sugar was one of the chief "carbohydrates" or carbon substances in food which, when absorbed into the system was carried by the blood to the lungs. There it combined with the oxygen we inhale, and burned up the waste and poisonous matters, which we exhale in the form of Carbonic Acid Gas.

Beside the high percentage of Grape sugar, Raisins contain 2½ per cent. protein, which builds tissue, 3½ per cent. fragrant ether extract, from which the Raisin gets its delicate aromatic or Muscatel flavor; 2½ per

cent. cellulose, the fibrous part which would not be digested but act as a mild laxative and prevent constipation. Also 3½ per cent. mineral substances, principally iron, which was one of Nature's finest tonics.

If these constituents were calculated out by the ordinary measurement of heat or energy value, we would find that a single pound of Raisins would give 1,600 calories. Is it to be wondered at that Raisins have been one of man's staple articles of diet since Biblical times?

### ARSINETTE (Arsenate of Lead Powder).

"Arsinette" is manufactured by the proprietors of Cooper's Sheep Dip. Features: Finest of lead-arsenate particles, perfect suspension, even distribution, adhesiveness, effective for codlin caterpillars and other pests. A valuable spreader is incorporated during manufacture. Mixture from 1½-2½ lbs. of arsinette, with 100 gallons water. Price: 25 lb. cartons, 1/6 lb.; 5 lb. tins, 2/4 lb. Victorian Agents: NEWELL & CO. PTY. LTD., 189 King Street, Melbourne.

## The Clyde Simplex Driers

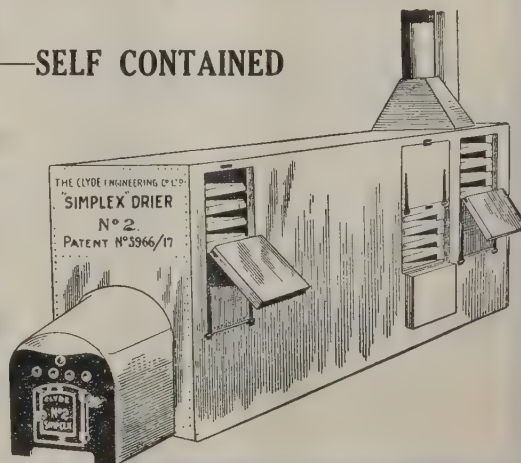
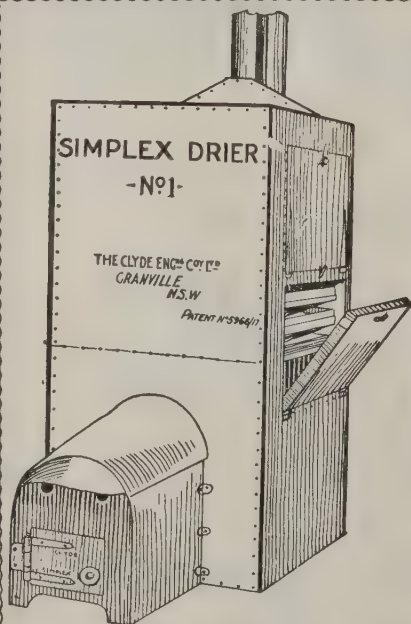
For Drying  
Fruit, Vegetables and other Products

NO MORE WASTE FRUIT OR VEGETABLES

SIMPLE — SELF CONTAINED

Made in Sizes to suit

Householders  
Small Orchardists  
or  
Large Factories



The Clyde Engineering Co. Ltd.  
GRANVILLE, N.S.W.

## SUPPORT CO-OPERATION

By Consigning your  
FRUIT to the

## Producers' Distributing Society Ltd.

(Late Coastal Farmers' Co-operative  
Society Ltd.)

— Agents for —  
"BLACK LEAF 40"  
and all Orchard Requirements

Melbourne Sydney  
Newcastle Hobart  
Launceston Devonport

## THE ORCHARD.

### Tests of Paper Used in Wrapping Fruit.

Practical tests conducted by the Bureau of Chemistry of the United States Department of Agriculture, to determine suitable papers for wrapping fruits and vegetables, show that paper for wrapping Apples, Oranges, Lemons, Pears, and Tomatoes should weigh 10 or 12 lb. per ream of 500 sheets, 24 by 36 inches in size, and that it should have a bursting strength of not less than six points. It should have sufficient flexibility and strength to withstand vigorous rapid twist given the paper in wrapping and to give a smooth, attractive appearance to the wrapped fruit. Paper complying with these requirements generally has been found satisfactory by the packers, but paper not complying with the specifications has not proved serviceable.

Wrapping papers of the right kind retard evaporations, and thus tend

to keep fruits and vegetables in a fresh condition. They will reduce damage in shipment from rubbing or jarring, retard final ripening until removal by the retailer, and they will give protection from dust, frost or the sun. While it cannot be expected that one kind of paper will prove suitable for all kinds of fruits and vegetables, the above specifications will enable shippers to purchase satisfactory wrapping papers.

It may be added that if the wrapper is closed round the stem the latter is prevented from puncturing adjacent fruit—an important point in favor of the practice.



(GIBBS BRIGHT & CO.,—See Page xiv.)

For Promptness, Reliability  
and Careful Attention

CONSIGN YOUR FRUIT TO

## RULE & BEAVIS

FRUIT EXCHANGE,  
SYDNEY, N.S.W.

A TRIAL SOLICITED.

Shipping Number, 80. Etab. 1888

## Latham Dehydrators

"STAND ALONE"

The "Rolls Royce" of the Artificial Drying  
World.

Particulars, Prices, and list of present  
users on application

## D. J. LATHAM

157 Queen Street,

Melbourne, Australia

## - LEMONS -

We are the largest Buyers  
in Australasia

C. M. BROOKE & SONS  
73 Whiteman St., South Melbourne, Vic.



# Why be satisfied with dwarfs and culls

Protect your fruit and rid your orchard and garden of Aphis and similar destructive insects at a cost of only a few cents a tree. "Black Leaf 40," the "Old Reliable" nicotine spray, is recommended by Agricultural Colleges and Experiment Stations. Spray singly or in combination with solutions for scale, codlin moth and other orchard pests.

Sold by leading Australian and  
New Zealand Dealers

Tobacco By-Products and Chemical Corp.  
Incorporated

Louisville, Ky., U. S. A.

Kills  
Aphis

# "Black Leaf 40"

40% Nicotine



## ORCHARD MANURING.

A highly successful experiment carried out by Mr. Kuhle, of Kyama, Kyabram, serves to demonstrate the value of manure applied to orchard land.

Mr. Kuhle, states the Melbourne "Argus," has a 36-acre closer settlement block, practically all of it virgin land, when Mr. Kuhle assumed possession about six years ago. The crop was planted on the rotation principle with canning Peaches—Apricots (ready for picking at end of December), Californian Cling Peaches, Orange Clings, Philips Clings, Goodman's Choice, Pullar's, and Thiele's Cling.

Mr. Kuhle experimented with manure upon a four-acre plot of Pullars. Three applications were given before waterings—on November 1 and December 20, 1925, and on January 12, 1926—at the rate of 20 cwt. an acre. The cost worked out at £8/12/- a ton. The manure was hand-spread, and the land well cultivated by motor-tractor.

From the most heavily manured portion Mr. Kuhle harvested 14 tons to the acre. The product of the manured plot represented a cheque from the cannery for £430, at £10 a ton. It is the intention of Mr. Kuhle to manure the whole area next season. Beneath the trees, where manure had been spread, there is a splendid growth of rich clover and trefoil, which constitutes a great asset when ploughed in.

From trees pruned by Mr. W. Nunn (orchard supervisor), which, it was estimated, would yield eight tons to the acre, ten tons were taken. Mr. Kuhle has experienced no trouble with Goodman's Choice, as to size when pruned according to the methods adopted by Mr. Nunn. The average life of a tree is given as 15 years, but by proper cultivation and the use of manure the productive period might be increased to 25 or 30 years.

Mr. Kuhle expresses satisfaction at the treatment he has received from the Closer Settlement Board, which, he says, has been most considerate and lenient.

## REFRIGERATION CONFERENCE.

The fifth conference of the International Institute of Cold Storage is to be held at Rome from the 19th September to the 1st October, 1927. The preliminary programme indicates that the congress will be divided into seven sections, dealing with, amongst other items, scientific questions, refrigerating materials, general appli-

## New Zealand is an Important Market for Australian Fruit.

### Ship Your Oranges, Lemons, Grapes to New Zealand



All consignments for this market will have careful attention and realize highest prices if sent to

### The Co-operative Fruitgrowers of Otago Limited, Dunedin

Personal supervision of every consignment.

Cheques posted promptly.

Drop us a Line or Cable  
"Peachbloom," Dunedin.

SHIP TO  
AUCKLAND, N.Z.  
Consign to the Up-to-date  
and Established Firm of

### TURNERS & GROWERS — LTD. —

City Markets, Auckland  
New Zealand.

Salesrooms comprise—  
55,000 ft. of FLOOR SPACE,  
including  
FRUIT COOL STORAGE ON  
PREMISES.

Staff of nearly 100 Employees  
Competent Salesmen only  
employed.

HIGHEST PRICES  
PROMPT RETURNS.

CABLE ADDRESS: "Cantab"  
P.O. Box 439.

BANKERS: Bank of New  
South Wales, AUCKLAND.

## EXPORTERS TO NEW ZEALAND!

There is not a better market  
for you than

## DUNEDIN

Ship under Brand



To—

## THOS. PATERSON & CO.

Established 1879.

Fruit and Produce Brokers and  
Auctioneers

VOGEL STREET - - DUNEDIN

We Solicit Consignments of  
ORANGES LEMONS PASSIONS GRAPES

Cable us "PATRICROFT," Dunedin,  
We will give you Market Values.

Address all correspondence to—P.O. Box 132, Dunedin

cations of cold storage, transport, legislation, general economy and statistics. The official languages of the congress are French and Italian, English, Spanish, and German are admitted. Summaries of the main points dealt with in reports and papers for the congress must be sent to the office of the Institut International du Froid, 9 Avenue Carnot, Paris 17e, not later than 31st January, 1927, in order that they may be printed and distributed to delegates.

The congress is under the patronage of the City of Rome, and a reception by the Governor of Rome will be held in the Capitol. Visits will be paid to scientific and industrial establishments near at hand, and excursions made to Naples, with Capri and Pompeii, Trieste, Venice, Trente, and Milan. A banquet will also be tendered the official delegates by the Italian Government.

### GENERAL MANAGER OF THE FORD MOTOR COMPANY ON IDEALISM.

Speaking on "Ideals in Business" recently, Mr. H. C. French, General Manager in Australia for the Ford Motor Company, gave it as his impression that Australians were disposed to look elsewhere than among business men for the fullest expression of idealism. Kindliness, culture, refinement and education were influences which Australians rated highly in their private and national life, and they seemed to feel that these things were more likely to be found among professional people than in business.

He thought the time was rapidly approaching when the true aspirations of business would be better understood and expressed. The chief

function of business was to serve, he said. Aimed at sincerely, this was, in itself, a high motive. In 1904, way back in the beginning, Mr. Henry Ford voiced this ideal:

"I will build a motor car for the great multitude. It will be large enough for the individual, but small enough for the individual to run and care for. It will be constructed of the best material by the best men to be hired, after the simplest design that modern engineering can devise, but it will be so low in price that any man making a good salary will be enabled to own one and enjoy the blessings of God's open spaces."

#### Very Tough!

"That flour you sent me yesterday was very tough, Mr. Sandman."

"Tough, madam?"

"Yes; my husband simply couldn't get his teeth into the pastry I made with it!"

## METTERS NUFREND SPRAYING OUTFITS

We are taking this opportunity of introducing ourselves as makers of SPRAYING OUTFITS as an adjunct to our many other lines. WE HAVE A CATALOGUE OF SPRAY PLANTS which should fill any requirements in the VINEYARD or ORCHARD, also for the BLOWFLY PEST.

Included in this list we have Hand Power, Horse Tractor Power and Engine Power. Our Pumps are standardized—all wearing parts are of Brass and Bronze, and easily replaced. We can supply Power Plants for narrow lands, which are equally safe in their operations in the hill districts, as in flat country.

We ask you to write us for a complete Catalogue and state what your requirements are, so that we can advise you to the best advantage.



**METTERS LIMITED,** 142 Rundle St., ADELAIDE, S.A.

Catalogues posted free to any Address.

Victorian and Tasmanian Agents—The FARM & PASTORAL SUPPLIES Pty. Ltd., 500-2 Bourke St., Melbourne.



# FRENCH POTASH

*The Essential Fertilizer !*

## MURIATE and SULPHATE

ARE BOTH AVAILABLE

### POTASH

is the most important Nutritive  
Element in the Orchard, ensuring  
Better Fruit

*It Pays on all Soils*

Full Particulars and Prices from the Sole Agents :

## DALGETY & COMPANY LIMITED

461 Bourke Street—Melbourne

And All States

Agents Wanted where not Represented

Ample Stocks  
throughout  
Australia  
Every Season



Ample Stocks  
throughout  
Australia  
Every Season

## Arsenate of Lead

Every other manufacturer refers to Swift's  
as the Standard of the Line

### NEW STOCKS OF SWIFT'S EVERY SEASON

Growers who want the **BEST RESULTS** and insist on having SWIFT'S should book their orders early.

Every grower knows it is **Folly to Plant Inferior Trees**

Price does not count.

**Inferior Sprays** are dear at any price, and it is folly and waste of money and time to use them.

They **Damage Trees** secured at great expense and labor, and do not give the **Best Results** as regards quality and percentage of clean fruit.

SWIFT'S does not damage Trees or Fruit.

SWIFT'S improves Quality and Color of the Crop.

SWIFT'S Saves Money and Labor, and because it does not wash off or wear quickly, Growers need not Spray so many times as with other materials

SWIFT'S secures the maximum of Clean Fruit at the minimum of expense of spraying, picking and packing, there being no Grubby Fruit to handle.

"The Grower who sprays thoroughly with SWIFTS is the man who succeeds."

# SWIFT'S ARSENATE OF LEAD

### AGENTS :

ROCKE, TOMPSITT & Co., 292-298 Flinders St.,  
Melbourne, Victoria

D. & W. CHANDLER PTY. LTD., 290 Brunswick  
St., Fitzroy, Victoria

E. & W. HACKETT LTD. 73 Rundle St., Adelaide,  
South Australia

HARRIS, SCARFE & SANDOVERS LTD., Hay  
St., Perth, Western Australia

F. W. HERITAGE & Co., Hobart and Launceston,  
Tasmania

ANDERSON & Co., 399 George Street, Sydney,  
New South Wales

AUSTRALIAN DRUG Co. LTD., Australia House,  
Carrington Street, Sydney, New South Wales

HOLDSWORTH, MACPHERSON & Co., George  
St., Sydney, New South Wales

TAYLOR'S & ELLIOTT'S LTD., Charlotte St.,  
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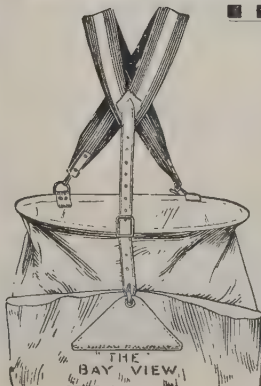
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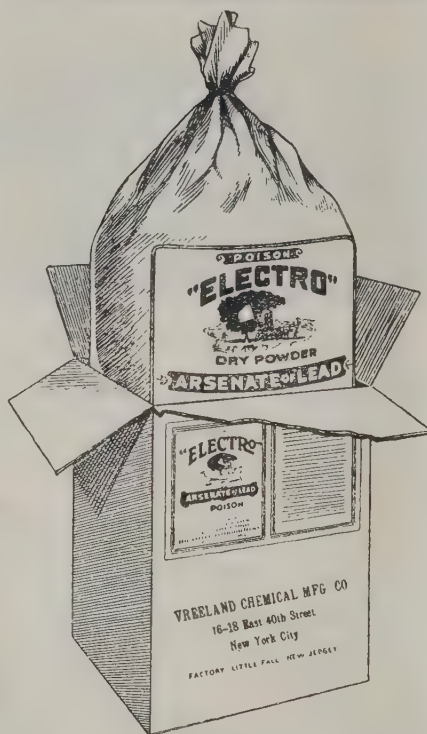
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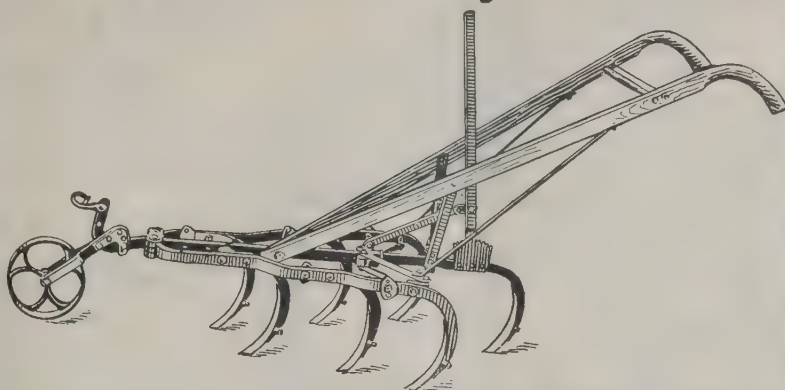
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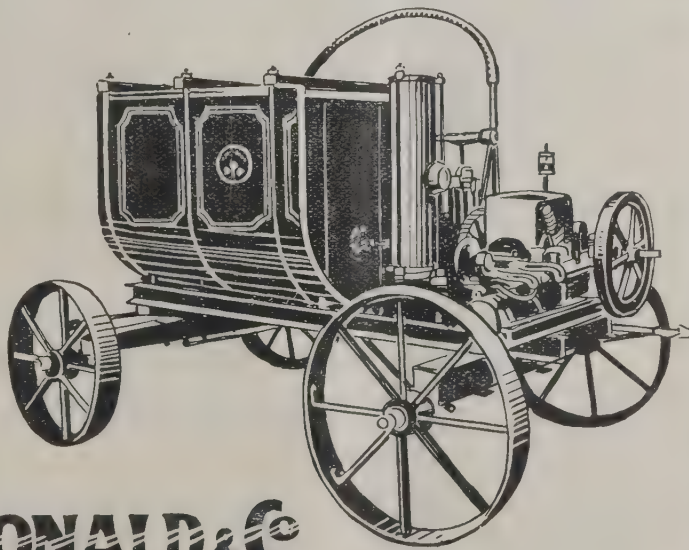
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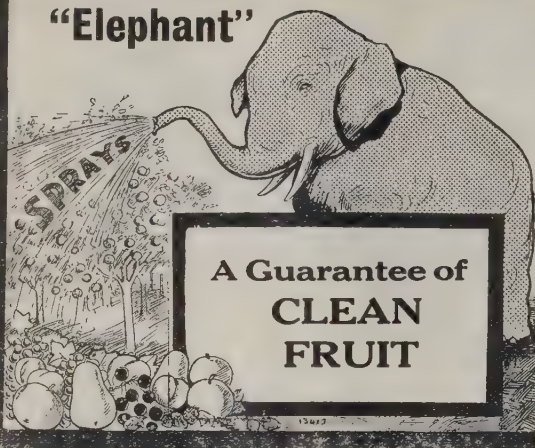
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Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

"The Fruit World" Offices (where copies and full particulars are obtainable) are as follows:—

**VICTORIA** — Bank House, Bank Place, 410 Collins Street, Melbourne.

**NEW SOUTH WALES** — 8 Bridge Street, Sydney.

**South Australia:** W. F. McConnell, Grenfell Buildings, Grenfell Street, Adelaide. **Tasmania:** Saunders & Co., Murray Street, Hobart. **Western Australia:** D. L. Hetherington, Colonial Mutual Buildings, St. George's Terrace, Perth. **Queensland:** Gordon & Gotch Ltd., Queen Street, Brisbane. **New Zealand:** Gordon & Gotch Ltd., Wellington, Dunedin and Auckland. **Great Britain:** Harvey H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

**R. E. BOARDMAN, A.F.I.A.,** Managing Director and Editor.  
**E. H. WRAGG,** Secretary and Advertising Manager.

**Tasmanian Director:** HON L. M. SHOO-BRIDGE, M.L.C.

**COMBATING FRUIT DISEASES.**

"Diseases Must be Bred Out," stated the late Luther Burbank.

Professor D. McAlpine, of Croydon, has forwarded us a letter he received in 1915 from the late Luther Burbank, relative to Mr. McAlpine's work on Bitter Pit in Apples, and we are pleased to have the opportunity of reproducing the following extracts:—

"The Bitter Pit has been in America in Apples from my earliest memory. Fifty years ago it did quite extensive damage with the Baldwin Apple—the favourite of New England—and several other varieties. I did not notice it in California until within a few years, and it is not by any means as serious here as it is in the moist climates. I had supposed that the cause of this was the extra thick, tough skin which Apples acquire in this dry climate, giving them unusual keeping qualities. It is not generally considered a serious disease in California at the present time, though it almost always affects the Baldwin Apple when no other Apple is thus affected.

"In the Eastern States—that is, in New England—it used to affect the Blue Pearmain. It also affects there the Black Ben Davis and sometimes the Northern Spy and Early Harvest, but the Gravenstein and Red Astrachan seem never to be affected either here or in the east, as far as I know.

"From your report I am now more than ever convinced of what I have long believed; that all fruit diseases and defects must in the end be bred out of them, rather than combated in the varieties which are susceptible to them. I have produced so many varieties among all species of fruits, nuts, and other plants, which are totally resistant to common diseases, that they assume almost a trivial importance in my own mind."

**CO-OPERATIVE SUCCESS.****Fundamental Business Principles.**

In an article appearing in a recent issue of the "American Pomologist," headed "What We Have Learned About Co-operation at Sturgeon Bay," the author, M. B. Goff, tells some of his experiences with the co-operative movement in Wisconsin; how the particular co-operative of which he speaks developed from a small to a large and strong organisation through judicious management and what, in his opinion, are the essentials in the success of any co-operative.

In summing up the situation he says:—

"Co-operation is a mighty force. It is like a religion and is a movement destined to make great achievements for the welfare of agriculture, but when it is stripped of its so-called religious enthusiasm and is separated from all the propaganda that is being circulated in its favor to-day, the one stern fact still remains, that any co-operative success is at bottom founded on fundamental business principles exactly the same as those used in all successful business. These principles are that the organisation must perform a service, for which there is an economic need; it must render a return commensurate with its cost; and to continue, it must maintain harmony within itself."

In our opinion, the last sentence in this statement should be the watchword of every co-operative organisation and the goal toward which every co-operative manager should work.

We have in the past endeavored to instil too much sentiment into our co-operative organisations. Less sentiment and more good sound business tactics must be practiced if the movement is to grow and succeed.—"California Cultivator."

**CO-OPERATIVE PROFITS.****The Benefits of Organised Marketing.**

"Citrus Leaves," published in California, where they have reduced co-operation to a fine art, has the following in its March issue:—

Profit in the Orange business is not a will-o-the-wisp which only the so-called "lucky" are able to bag—it is the natural resultant of efficient handling of a highly specialised industry. Many things are necessary before a Citrus-grower will consistently profit from his investment—but the main ones are:—(1) A sensible and intelligent operation of the grove, and (2) the assistance of a genuinely co-operative marketing association. The era of haphazard selling is gone. Bucking the game alone is like riding to-day in an ox-cart—you always arrive just too late.

Growers who co-operate with their neighbors in moving their crops, will ultimately show the highest consistent returns on their investment. A "high price" now and then is not profit—the low spots take the cream. If you are not marketing co-operatively, don't let another season go by without carefully investigating the operations and methods of some well established and efficient co-op. selling institution.

## CONTROL OF THE APPLE INDUSTRY.

### Conference to be Held.

**I**N A STATEMENT in the House of Representatives on August 13, the Minister for Markets and Migration (Hon. T. Paterson) said it was estimated that the cost to the Commonwealth of proposed financial assistance to Apple growers who had sustained losses through the strike was £300,000.

The Australian production of Apples during 1926 was approximately 7,250,000 cases, of which 3,176,600 cases (44 per cent. of the total production) were exported, and 4,073,400 (56 per cent.) were sold in Australia. Of the export quota about 2,960,000 cases (40 per cent. of the total production) were exported to the United Kingdom, a small proportion of which was sold on the Continent. As far as could be ascertained at present the position in each State was somewhat as follows:—New South Wales sold 98 per cent. of its production of 650,000 cases in Australia, and exported 2 per cent; Victoria sold 78 per cent. of 2,000,000 cases in Australia, and exported 22 per cent.; South Australia sold 64 per cent. of 900,000 cases in Australia, and exported 36 per cent; West Australia sold 43 per cent. of 500,000 cases in Australia, and exported 57 per cent.; Tasmania sold 34 per cent. of its record production of 3,200,000 cases in Australia, and exported the remaining 66 per cent.

With the exception of Tasmania, each State appeared to have sold the bulk of the fruit exported at f.o.b. prices, which left a margin of profit to the grower. Of Tasmania's total export probably only from 10 per cent. to 15 per cent. was sold f.o.b. It was said that many growers, particularly in Tasmania, because of the adverse position in Great Britain, were now unable to secure finance to purchase fertilisers and other materials necessary to cultivate the coming season's crop. Whilst very much regretting that such a position had arisen, the Commonwealth Government could not compensate growers for losses sustained during the past season. Its policy was to assist a primary industry, such as that of Apple growing, to hold and develop its overseas market, provided the industry was thoroughly organised and could show that its products were sold in a regular and orderly manner, and in the best interests of the growers.

Fruitgrowers' organisations in each State are to be asked to discuss the proposals for control of export and oversea marketing, and to send one

representative from each State to meet the Minister in Melbourne in September, to consider proposals for an organisation that would be thoroughly representative of the growers throughout Australia. Among matters to be considered by the Conference were:—

- (a) Regulation of supplies, so as to prevent gluts.
- (b) Restriction of early shipments to eliminate immature fruit.
- (c) Concentration of selling agencies.
- (d) Elimination of speculation.
- (e) Advertising and propaganda.
- (f) Financing of exports.
- (g) Reduction of freight and expenses.
- (h) Restriction of exports to payable varieties only.

Both South Australia and Victoria have asked that two delegates from each State be admitted to the Conference, and that the Conference be deferred till October.

## SPECIAL NOTICE

### The "Fruit World"

#### Head Offices

are now situated on the

Ground Floor  
Bank House  
Bank Place

Off 410 Collins Street  
Melbourne

Please Address all Communications Accordingly

"We are very pleased with your interesting and valuable paper for the fruitgrowers."—J. Donaldson, Paradise, S.A.

Americans are consuming about three times the fruit per capita that is used in Great Britain. It is estimated the same proportions apply as regards Australia.

## THE CO-OPERATIVE MOVEMENT AND BRITISH LABOUR.

**A**N important decision was recently announced by the British Co-operative Wholesale Society, which represents organisations with £140,000,000 capital, employs 200,000 workers, and serves 5,000,000 members. It has decided that in the event of a coal miners' walkout or other national labour upheaval in Britain, the Society will supply commodities in the ordinary way of trade, but it will not give special facilities of any kind, whether by extended credits for the supply of goods, or by increased bank overdrafts, without proper security.

This is an indication of the growing recognition in Britain that economic facts cannot be ignored. The experience of Soviet Russia, where the co-operative movement has been almost destroyed, owing to its abandoning business for politics, is a warning too clear to be disregarded. The Russian story is told authoritatively in a report issued by the International Labour Office at Geneva. Having abolished private trade, and possessing only weak and badly organised administrative machinery of its own, this report says the Soviet Government sought in the co-operative a means of carrying out its scheme of State provisioning.

"Economic ruin," the report states, "reached its climax at the beginning of 1921. The towns were practically blockaded by the country district, and this gave rise to a continued and acute shortage of food in urban districts. Workers quitted factories and workshops en masse and returned to their villages. The consumers' co-operative failed utterly."

The collapse was so complete that the Soviet Government was obliged to start afresh. Private traders were allowed to do business once more, and they rapidly left the co-operative societies behind them. In 1924-25, the report states, "the consumers' co-operative sold no more than one-fifth of the whole produce of the State industries."

The Soviets recognised that the advantages derived in no way compensated for the economic sacrifices made to develop the co-operative system. In this connection Henry Ford, in his book, "The Great To-day," makes this interesting comment on the conversion of the Communist rulers from their obsession: "When Russia made that amazing right-about face, and abandoned official communism for a partial return to private enterprise it simply testified to the indispensability of self help to any people."



## COUNCIL OF SCIENCE AND INDUSTRY.

### Useful Programme Projected.

Senator Pearce stated, on July 5, that the recommendation of the Council for Scientific Industrial Research, re pests and diseases, cold storage, etc., had been approved by the Government. Enquiries are to be made regarding the economic importance of various plant diseases and pests, and special attention will be given to problems affecting the Murray River irrigation settlements, and the cold storage and transport of fruit. The offer of Sir Frank Heath, of co-operation with the British Department of Scientific and Industrial Research would be availed of.

In this connection, a number of young Australian scientifically-trained research workers have been appointed to go abroad for special training.

### THE SUGAR QUESTION.

AT THE ANNUAL CONFERENCE of the Victorian Grocers' Association, held in Ballarat on August 22, the question of sugar distribution was referred to as "disgraceful," and it was unanimously decided to urge the Federal Ministry to institute enquiries into the unsatisfactory arrangements regarding supplies to Victoria.

It was pointed out that in a few months people would be wanting sugar for jam-making, and as things were at present, grocers would be unable to supply it. Lack of sugar meant unemployment in other industries, which were being strangled by the sugar octopus.

Mr. J. N. Williams, General Secretary of the Association for Victoria, said that some sinister influence was at work in the sugar industry. It was a key industry. Every shortage had been due to mishandling supplies, and had caused unemployment. Some very definite move must be taken by the Ministry or hundreds of tons of fruit would rot. A crash in the fruit industry would react for the next 12 months.

### EMPIRE FRUIT REPORT.

A copy of the third report of the Imperial Economic Committee, dealing with the marketing and preparing for market of fruit grown within the Empire, has been received. This is a very comprehensive statement dealing with all classes of fruit, in which the principle of Empire preference is advocated, and the need for economic as well as scientific investigation stressed.

## "FUNGUS DISEASES OF FRUIT TREES."

### Every Grower Should Have This Splendid Book.

Mr. Cunningham, B.Sc., of New Zealand, has written a splendid book, entitled "Fungus Diseases of Fruit Trees," which ought to be on every grower's bookshelf. It is a book of 400 pages, containing 166 illustrations, beautifully printed and illustrated. While it is necessarily technical, all the terms are explained in everyday language. It is essentially practical, as well as scientific. It is most cordially commended by Professor McAlpine, the world-wide authority on fungus diseases. The

prohibited of all dried fruits, of canned Apricots, Cherries, Peaches, Pears, Pineapples, and Plums, and of fresh Apples, Pears, and Oranges unless the fruit has been prepared, packed, and graded, to the satisfaction of an officer of Customs in accordance with the regulations under the Customs Act and the Commerce (Trade descriptions) Act. Formerly the prohibition applied to only some of the kinds of fruit named.

After the Fruitgrowers' Convention terminated at Portland, delegates made a suitable presentation to Mr. W. J. Williamson, of Portland, in recognition of his valuable services in organising the local arrangements for the Convention.



### INCREASED YIELDS FROM MURIATE OF POTASH.

Orange trees in Mr. F. J. Olorenshaw's Grove, Renmark, S.A., receiving  $1\frac{1}{2}$  cwt. per acre gave 6 cases; trees receiving  $2\frac{1}{2}$  cwt., 81.5 cases. Mr. Olorenshaw is seen holding Oranges; Mr. H. Lucas, Manager Renmark Fruitgrowers' Co-op. Ltd. (the shed which handled the Oranges) appears as a guarantee of the accuracy of the statements.

### FINE DELICIOUS APPLES.

Recently Mr. Leith Napier, of Dalgety's, exhibited in a Melbourne shop window two magnificent Delicious Apples, grown by Mr. R. E. Haysey, of Narre Warren, Vic. The larger Apple weighed just one pound. The trees received up to six pounds muriate of potash, the whole orchard receiving an average of three pounds muriate of potash with phosphatic manure.

possession of the book is of economic value to every grower. The price is 15/9, and is obtainable from the N.Z. Fruitgrowers' Federation, Wellington, N.Z., or in Australia from the "Fruit World," Bank House, Bank Place, 412 Collins-street, Melbourne.

### CONTROL OF EXPORT PACKING AND GRADING.

By proclamation published in the "Commonwealth Gazette" on July 29, the exportation from Australia is

# Up-to-date Fruit Grading.

**Machines that Promote Orchard and Packing House Efficiency.**

THE watchword of to-day is efficiency, and one of efficiency's chief handmaidens is standardisation. Standardised production spells low costs; a standardised product means the establishment of a reliable name on the markets of the world.

Fruitgrowers, like all other producers of a marketable commodity, must keep abreast of the times. It is no longer sufficient to grow good fruit; to command the attention of buyers, it must be put on the market in the most attractive form. A case of fruit of mixed varieties and uneven sizes will, nine times out of ten, be passed over, while one of possibly inferior average quality but of even grade, will command a good price. It has been proved the best economic practice to concentrate on the growing of relatively few standard varieties, and to grade the fruit produced with the utmost care. This fact is thoroughly appreciated in California, perhaps the largest fruit-producing country in the world, whose products have an unrivalled name in European markets. For Australians to successfully compete with American growers, whether it be in canned or dried fruits, or fresh Apples and Pears, careful, scientific grading is of first importance.

Mechanical fruit grading machines are of comparatively recent development. The first machines left much to be desired, but improved designs have gradually been devised, and there are on the market to-day fruit graders which combine to give the maximum of efficiency with the minimum of expense.

An Australian industry well worthy of support has been developed by the "Lightning" Fruit Grader Co., whose well-equipped factory at Collingwood, Melbourne, is devoted exclusively to standardised grading machines of the highest quality and latest design. These graders have proved their worth for all classes of fruit, and are in use by hundreds of growers all over Australia, New Zealand, and in South Africa and other parts of the world.

The first requirement for successful standardised production is an efficient factory, and in this respect the works at 5 Hoddle-street, Collingwood, meet all requirements. The latest and most up-to-date wood and iron working machinery has been installed, and only skilled workmen are employed. Factory costs are reduced to a minimum by the organisation of each specialised department, and overhead

charges are kept down in proportion to the large output. The quality of the material used is of the best, and coupled with excellence of design, and the skill of the workmen, has ensured for the "Lightning" Fruit Grader its popularity among growers.

From a small beginning, works of considerable importance have developed. The "Lightning" Grader was designed, patented, and manufactured by practical growers, who understood and appreciated the fine points of the industry.

No expense has been spared to bring the graders to perfection. By moving amongst growers, studying problems on the spot, and keeping abreast of the times, the manufacturers of the "Lightning" Grader have included in their machines every conceivable device in order to give the highest possible efficiency.

At their works, one sees up-to-date and specially designed machinery installed for preparing the various parts of the Grader. There is close supervision over every item in the process of manufacture.

Recognising that there is no higher appreciation than the unsought testimony of a satisfied user, the "Lightning" Grader Co. seem determined to have every user a satisfied user and a permanent advocate for their products.

The fact that the "Lightning" Grader was designed by practical growers ensures its suitability for their needs. Having learnt what was required under practical working conditions, the mechanical construction of the machines was given the most careful attention; and the result is a Grader made of high-quality standardised parts, yet adaptable for all requirements. The small grower who installs a small machine need not fear that in a few years he will have to scrap it, and secure a more expensive one to meet his increased production. The parts are so arranged that the Grader can be enlarged as his needs grow.

The primary essential in fruit handling is that there shall be no bruising. This is a basic principle of the "Lightning" Grader.

That the application of this principle is a practical achievement and no mere idealistic dream, is proved by the fact that "Lightning" Graders are used in many fruit canning factories. Here perfectly ripe fruit is handled on the roller conveyors, and delivered to the belts for the sizing process. As only fruit in perfect condition is re-

quired for high quality packs, the utmost gentleness is necessary, and is achieved. The turning of the fruit on the conveyors to show all sides and expose defects is of great advantage. The success of the "Lightning" Grader in this class of work has earned it a reputation of which its makers may well be proud.

The latest development in the direction of efficiency, combined with economy, is the new "Lightning Junior." This machine is being manufactured at a low price to come within the means of growers who are not yet in a position to instal an expensive machine, yet who wish to put their fruit on the market in the best possible manner. The "Junior" has large packing bin space, and is made on exactly the same principle as the larger machine, and includes the genuine "Lightning" solid rubber roller—a special feature of all "Lightning" machines.

The "Junior" is accurate, of sound construction, and simple to operate. Of the six packing bins on the Grader, there are four each measuring about 3 ft. 3 in. by 3 ft. 3 in., and two measuring about 2 ft. by 3 ft. 3 inches each. It will thus be seen that there is ample space allowed for all requirements.

## Citrus Brushing Machines.

Following a practice which is almost universal in citrus packing-houses in America, the use of machines for washing and brushing citrus fruit prior to packing, will become increasingly popular among growers here.

The American machines, however, are subject to a heavy duty, and until recently none were manufactured in Australia. Now, however, growers will be pleased to learn that the "Lightning" people have undertaken this work, and are putting a machine on the market which will meet all the requirements of even the largest packing houses. As in all their lines, the "Lightning" Fruit Grader Company are studying the growers' interests, and making special efforts to supply their every need.

## At the Royal Show.

As in previous years, the "Lightning" Fruit Grader will be demonstrated in actual operation at the forthcoming Royal Agricultural Show, Melbourne. Fruitgrowers, farmers, factory managers, and others interested are invited to visit the stand at No. 65, Plummer Avenue, when full particulars will be supplied and demonstrations given. A visit to the Collingwood factory will also prove full of interest, and visitors will be cordially welcomed by the management.



# The Interstate Marketing of Fruit.

Co-operative Transport is an Advantage.

Freight Reductions : Less Handling : Better Supervision.

AT THE VICTORIAN FRUIT-GROWERS' CONVENTION, held at Portland during May, an address by Mr. F. J. Churches, of Kyabram, was greatly appreciated by the delegates. Mr. Churches said:

The commercial atmosphere to-day is charged with ideas of organised marketing—boards of control, fixation of prices, limitation of agents, last and most turbulent of all, Committee of Direction. All these ideas have behind them the best of intentions on behalf of the primary producer—the securing of better returns for his labour.

The pressure of competition is compelling organised marketing.

## The first step

is the co-operation of the fruitgrowers through the canneries and packing-sheds. The growers in the north have succeeded to a marked degree; they are organised in the various centres of the Goulburn Valley in their local associations. These associations are then united in a central organisation, the Northern Victorian Fruitgrowers' Association. Through that organisation we have collectively transported our goods through our own market representative in Sydney. We have achieved remarkable results, and saved the growers thousands of pounds over a period of years.

The Goulburn Valley growers sent me to Sydney to watch the transport of our goods. At Albury, which in previous years had been a scene of great trouble for the fruitgrowers, I found, under the able organisation of our market representative, Mr. D. G. Wills, a most efficient system of supervision for the transport of our fruit. There was less confusion and less damage done at Albury than at the average Goulburn Valley station, where the growers loaded their own fruit.

In Sydney the organisation for bulk carting is equally efficient. Sixty lorries, owned by one man, who is under agreement with Mr. Wills to take care of the fruit, waited at the railway yards for the gates to open at 6 a.m.; each lorry knew where it had to go, and there was no confusion. Out of 9,000 cases of fruit I found only two damaged cases.

Due to the careful handling and bulk transport of the fruit, there is an average saving to the growers of 6d. per case on freight. The Apple-growers, on the other hand, through

lack of organisation and lack of representation on the Brisbane market, I have been told, lost £2,035 on consignments to Queensland.

There is no reason why the benefits which have accrued to the Northern Victorian fruitgrowers should not also accrue to those in the south, under similar efficient organisation.

## The Bulk Loading Scheme.

Mr. D. G. Wills, Sydney Market Representative of the Northern Victorian Fruitgrowers, in outlining the system of bulk loading of fruit, stated:—

"Six years ago, the Ardmona Fruitgrowers' Association invited me to put forward a proposal for bulk loading and market supervision of their Sydney consignments. This being accepted by the Ardmona growers, the Northern Victorian Fruitgrowers' Association was made possible by other districts, viz., Shepparton, Merrigum, Lancaster and Tatura, joining with the bulk loading scheme. This organisation gave the growers cheaper freight, market representation in Sydney, and much improved transport on the New South Wales railways.

"Mr. Churches has referred to the freight savings in that respect; the average annual savings to growers for the past six years have been at least £5,000 per annum, which shows the necessity for other districts getting together in respect to transport matters. On the transport question rests a solution of most of your subsequent troubles in the interstate marketing of fruit.

## Control of Agents and Supplies.

It has been mooted for some considerable time that some limitation of agents and co-operation with growers as applied to the sale of Goulburn Valley fruit was desirable. Mr. Churches, when in Sydney, suggested the formation of a Committee of Agents with myself as chairman and growers' representative to act as an advisory committee in regard to the requirements of the Sydney Markets.

"This arrangement was agreed to and subsequently ratified by the G.V.F.G.A. The Association will arrange to give us two or three days' notice by wire of the amount of fruit coming forward. One of our difficulties in the past has been that we had no knowledge of what was coming. Under this arrangement, agents will know whether market conditions are such as to absorb the quantity of fruit forwarded, and will

be able to advise the growers what quantities are required. Arrangements will be made to cool store any temporary surplus. The regulation of market supplies in this way will mean stabilisation of prices—irregular supplies being the main cause of either glutted market and great losses, or short supplies with high prices to a few growers, but loss of much trade to the majority.

"I am convinced that the present system of competition as between the agents, under the control indicated, is the best in the growers' interests.

## The Policy of the Railways.

"In regard to Victorian Railway transport of fruit, I would like to draw attention to the policy of the Railway Commissioners of New South Wales, which is to induce every fruit-growing centre in New South Wales to go in for bulk loading as against individual consignments by growers. The saving to the Department is, in wear and tear of rolling stock, better and easier supervision, much less clerical work, and the easier adjustment of claims.

"If the N.S.W. Railway Department find that it pays them to encourage bulk loading, why should it not pay the Victorian Department?"

## Benefits Direct and Indirect.

In reply to a question, Mr. Wills stated that all the fruit was consigned to him, and he paid all freights to Sydney and charged them to the agents. He also paid the inspection charges included in the freight. Regarding the Goulburn Valley fruit he also controlled and paid the contracting carrier for carting. Truck loadings of a minimum of 21 tons were made up at Albury through consignments to him from various Victorian centres. These obtained the minimum freight; if not consigned to him, they would have to pay, in most instances, the maximum freights. The rate he paid was 25 per cent. less than for 6 ton consignments, 40 per cent. less than an individual consignment. If a Goulburn Valley grower were to send from one to four cases direct to his Sydney agent, it would cost him 3/4 a case; consigned to the Market Representative with the rest of the consignments on the day, it would cost him 1/2½ per bushel case.

Referring to market supervision, Mr. Wills said that the indirect benefits to the growers of this service, although not so apparent, were really greater than the direct benefits of freight saving. As Market Supervisor he attended the markets each morning to see if any consignments required reporting upon. Reports were frequently necessary. He

reported to the growers concerned regarding the condition of their fruit.

The losses sustained by Victorian growers on consignments to Queensland amounted to £2,035, this being the difference between the freight actually paid, and the freight that would have been paid had all the fruit been consigned over the N.S.W. railways in full truck loadings, of which the minimum is 21 tons. The principal stations concerned were:—

|                      | Total Tonnage<br>Forwarded. | Tonnage subject<br>to "M" rate—<br>full truck<br>loading. | Tonnage<br>subject to<br>"M" rate,<br>plus 25% | Differ-<br>ence. |
|----------------------|-----------------------------|-----------------------------------------------------------|------------------------------------------------|------------------|
| Harcourt . . . . .   | 1740                        | 1113                                                      | 627                                            | £392             |
| Tyabb . . . . .      | 1032                        | 536                                                       | 496                                            | 309              |
| Somerville . . . . . | 496                         | 135                                                       | 361                                            | 227              |
| Hastings . . . . .   | 352                         | —                                                         | 352                                            | 220              |
| Blackburn . . . . .  | 286                         | 23                                                        | 263                                            | 165              |
| Narre Warren . . . . | 286                         | 22                                                        | 264                                            | 165              |

Eleven other stations forwarded smaller quantities, none of which was

subject to the "M" rate for full truck loadings.

#### CODLIN MOTH CONTROL.

"In my opinion it would pay to have a trained man appointed in each Apple-growing district to watch the development of the codlin moth, in order that spraying might be conducted at a time when it would be most effective. The cost of this trained man would be saved many times over in labor and material in spraying, whilst more clean fruit would be harvested," stated by Mr. J. H. Lang, at the recent Conference of fruitgrowers at Portland, Victoria.

From what he had read of the infestation of codlin moth in American orchards, said Mr. Lang, he was of the opinion that we in Australia did not know what codlin moth was. "Hear, hear," from Mr. Ward.

Mr. W. Lipscombe (Croydon) stated his experience that trees which he had bandaged to check the codlin grubs were cleaner from infestation than others not treated. He advocated that bandaging of trees be made compulsory.

Mr. A. F. Thiele (Doncaster) stated that unless bandages were attended to with remarkable precision, they were simply breeding grounds for the moths. He did not favor bandaging the trees.

#### CODLIN MOTH CONTROL.

Mr. P. Val Kerr, The Park Orchard Co., Mitcham, Vic., writes:—Re Codlin Moth, I have read the two articles in your July issue with keen interest, and I am quite in accord with Mr. Lang in that we require considerably more data on the life history and habits of this pest.

From my observations, I should say that the calyx spray is unnecessary in the average season. I base this statement on data obtained by me at this orchard, and this is largely supported by the fact that few fruits are found in which the grub has entered at the calyx.

My method of checking for the time to apply the first spray is as follows:—I collect about one hundred larvae by means of bandaging trees; these are placed with a light covering of bran in an observation cage,

placed in a tree in the orchard. On the appearance of the first perfect insect, I commence spraying. Although it takes three weeks to spray the whole orchard, our losses (over three seasons, from infection by the first brood have been negligible.

The dates upon which the first moth has appeared in the cage are:

urgently needed. The largest losses by codlin (combined with light brown apple moth) are undoubtedly wrought later in the season, largely, I think, on account of warmer temperatures and failure to apply late sprays. In passing, I might say that the light brown apple moth is likely to require more attention in



VICTORIAN FRUITGROWERS' CONVENTION AT PORTLAND.

Top.—Some of the Delegates outside Mac's Hotel.

Bottom.—Three well-known growers' representatives—Left to right: Messrs. A. F. Thiele, John Tully, and C. H. Jost.

—1923, 26th Nov.; 1924, 22nd October; 1925, 26th October.

Of considerable interest is the appearance of the moths, emerging from the pupae of the first brood, over a lengthy period, usually several weeks: last year a perfect insect appeared in the cage on 18th December! My experience is that there is much overlapping of broods, and information on this point is

the future, and it seems possible that stone fruits may be required to be sprayed in order to minimise the later attacks of this pest on Apples.

Personally, I do not think bandaging would be worth the time and expense, but the trapping by means of lures opens a large, and possibly profitable, field. I should like to see more experiments performed on this means of control.



## Queensland

The Productive Montville District : Citrus Cultural Hints

"Queensland Fruit Marketing Act has not Justified its Existence"

[The following interesting article comes from the pen of Mr. R. M. Ross, of Montville, Queensland, in collaboration with Mr. J. T. Woolf, his colleague on the Citrus Sectional Group Committee of the C.O.D. The latter is well-known as a prize-winner with citrus fruits at various shows.]

**M**ONTVILLE, situated on the top of the Blackall Range, 60 miles from Brisbane, is pre-eminently a fruitgrowing district. The principal fruits grown commercially are Citrus, Pineapples, and Bananas. Custard Apples and Persimmons thrive in our soil, but are not commercially exploited. Citrus is the principal industry, and we suffer from a plethora of varieties. The early maturing Oranges comprise mainly the seedling (in the older groves), the Sabina and Siletta, maturing from May onwards, while the Valencia is the only late Orange grown, being marketable from about the middle of August till the advent of the fruit fly, usually the beginning of November.

Navel Oranges comprise the Washington (principal), the Navelencia, and the Dunning Seedling, and mature early. The latter is from the buds of a seedling raised from a pip of a Washington Navel a number of years ago, and up to date has proved a shy bearer. The original seedling is growing at Woodford, about 30 miles from Montville, in a back yard, and is said to produce heavy crops of large fruit year after year without the slightest attention. Mandarin varieties are Scarlet (principal), Emperor, and Glen Retreat. With the exception of Lemons, all types of citrus grow well on the range.

The Pineapple industry is not far behind that of Citrus in extent, the variety grown being the smooth large Cayenne. Maturity is about a month later than the lowland crops, consequently the periodic gluts that occur, and are relieved by the canneries, do not adversely affect us.

On the eastern slopes of the range Cavendish and Lady's Fingers Bananas grow luxuriantly, and produce high class fruit. Extensive plantings have been made in recent years. On the range itself the Banana does not do so well, and for

some time has been declining in importance. Hillsides, sheltered from the west and south, are the locations it finds most congenial.

### Citrus Cultural Methods.

The cultural methods for Citrus follow a certain routine. The process of "cleaning up" is commenced at the end of the wet season, usually the beginning of May, and consists of cultivating with a hoe the soil under and in the immediate vicinity of the trees.

Fertiliser, if applied, is chipped in at the same time. The soil between the trees is either

cultivated with a hoe, a disc harrow, or a plough, according to the nature of the land and the ideas of the grower, and kept free from weeds by similar continuous operation until December, when the weeds are allowed to take charge. Mowing is afterwards resorted to until "cleaning up" time comes round again.

It is essential to provide some covering for the soil during the wet season to avoid the loss of soil by wash during heavy rains. Any orchardist who kept his land continually clean and cultivated, would go out of business in very short time.

### Green Manuring.

Of recent years, however, the practice of covering the land with useful legume crops (Cow Peas, Mauritius Beans) in preference to weeds, has found favour with some growers, and it seems likely that demonstration of the benefits derived therefrom will impel all growers to adopt the method.

In addition to providing necessary cover for the land, a legume crop vastly improves the texture of the soil, provides it with an abundant supply of nitrogen, and restores life to it in the form of humus. Experience to date has shown Giant Cow Pea to be the most suitable for the district. Planted in drills in September or October, with an application of phosphoric acid and potash, it requires careful attention until it reaches the stage of branching, when it may confidently be left to its own resources. It dies off, usually without seeding, in June, and leaves the soil in a fine state of tilth, and, if properly established at the start, free from weeds.

The Mauritius Bean, while probably more generous in its supply of nitrogen and humus

does not adapt itself to the district very well, for the reason that it does not start to grow seriously until the wet season, at which time we require our land fully covered. Its habit of climbing the trees renders it rather a nuisance in addition.

Legume enthusiasts are becoming more numerous annually, and it seems likely that the family of legumes will be given a thorough try-out in the near future to determine the variety best suited to our needs.

### Artificial fertilisers

are extensively used, the principal being a special citrus mixture of analysis, 4 per cent. nitrogen, 14 per cent. phosphoric acid, and 9 per cent. potash. Meat works' manures are also used. The writer, for general purposes, favours the broadcast application of bonedust, with a little potash primarily as a fertiliser for a legume crop, the trees themselves being regarded as a secondary consideration.

Pruning in this district is confined to keeping the inside of the trees sufficiently open to give easy access for spraying, dead wood being, of course, removed. Young trees naturally require heavy pruning at intervals, generally each winter, but the verdict of experience in the case of older trees is to leave them as much as possible undisturbed.

The result of a special demonstration of root pruning, some 8 or 9 years ago, rather put a damper on that type of pruning, and no record is extant of any useful achievement by any other method of pruning than that now in common practice.

### As regards spraying,

Montville may be described as a place highly favoured of Nature, insofar as we have more friends to our citrus trees than enemies, and the latter are consequently in a state of subjection. In normal years, such pests as red scale, white louse, pink wax, and mussel scale are practically unknown. Spraying for scales is not, therefore, necessary, though some growers give their trees an occasional treatment with red oil, 1 in 30-40, in the cool weather usually.

The main spraying is done with lime-sulphur standard solution, 1 in 18 to 25, in December to combat the effects of the mite Maori, which shows up usually in the hot dry days of that month, and to keep the trunks, limbs, etc., free of fungus, mosses and lichens.

Lime-sulphur is the general purpose spray, and most growers use nothing

else, and the one application annually is considered sufficient.

It might be mentioned that a few growers, the writer amongst them, sprayed their Mandarin trees just before the buds opened last spring with lime-sulphur, 1 in 18-27, to observe the effect on a curly leaf fungus that sometimes attacks the Mandarins, and imparts unsightly excrescences to the fruit. It is also suspected of causing the fruit to fall off in its early stages, though nothing definite is known, nor could any conclusions be drawn from the initial experiments.

Spraying is done with machines, varying from the modest Success hand pump, to the lordly motor-driven variety, but the majority of growers rely upon a hand pump attached to a 40-gallon cask on a low-wheeled platform, delivering the spray at a pressure of about 120 lbs. per sq. inch. The jolting of the vehicle from the water supply to the place of operation is sufficient to mix the contents of the cask.

#### **Fruit Marketing Organisation.**

##### **"Not Justified Its Existence."**

In the matter of our marketing organisation, there seems to be a general impression that the Fruit Marketing Act has not justified its existence, nor the enormous expense of maintaining it.

So far as the citrus industry is concerned, the Sectional Group Committee (of which the writer and his collaborator are the Montville members) has admittedly accomplished nothing useful in marketing matters, for the simple reason that it is recognised by members that their problem is not one of marketing, but one purely of production.

It would be idle to deny that in recent years there has been a serious loss of efficiency in citrus production in Queensland, due to causes outside the scope of this article, resulting in a weakened constitution of the trees, especially the older ones, the onslaught of pests and diseases, and general deterioration of the quality of fruit.

So far as it has laid in their power, members of the Citrus Committee have endeavoured to improve the conditions existing in the orchards, and it will probably be found at some future date that their efforts have not been entirely fruitless.

Recent trials of Cyanogas at Palmwoods reported to the Citrus Committee, indicate a method of opening a campaign to regain the lost efficiency.

The writer does not profess an intimate knowledge of the Banana and deciduous industries, but it is very likely that the problem of the citrus

industry is their problem also, or a considerable part of it.

**In the Pineapple industry the Fruit Marketing Act may be said to have obtained some positive results.**

Apart from the flamboyant claims made by the C.O.D., one of which was that the Pineapple growers had benefited by control to the extent of many thousands of pounds on a crop which, even at the time, had been destroyed by Nature, though we knew it not; and apart from the fact that smaller supplies have been available since control; it must nevertheless be considered that in the matter of price, the transport arrangements, and the allocation of supplies between canners, the Committee has made some improvement for the growers.

The recently-formed Cannery Pineapple pool, which has enabled a system of price-fixing for the canned product seems to have given satisfaction.

Yet the position is undoubtedly weak, for the maintenance of the present price for cannery pines is contingent upon the supply of the canned article remaining within Australian consumption.

For the next twelve months' production is not likely to exceed home consumption, yet if the price now paid for cannery pines is sufficiently attractive to give an impetus planting, it cannot be very long before the low prices of the past recur. The Fruit-marketing Act would then have completed the logical circuit of a pool.

To solve the problem created by the activities of the measure designed to solve the original problem, it would then become necessary to have an Act of Parliament to restrict plantings to an area sufficient to supply Australian needs, and there is not the slightest doubt that under present Government, such a course would be followed if the necessity arose.

**In Queensland we are in danger of acquiring the habit of solving one problem by the simple process of super-imposing a problem equally as great.**

As each problem requires a board, a chairman, a committee, a manager, a secretary, and a number of smaller fry, it would be understood that we are a State of "levied-upons."

**However, it appears certain that the Fruit Marketing Act will be rejected by the growers at the end of this year.**

The Act is already a dead letter in every vital respect, and the Amending Act is nothing more than the Primary Products' Pools Act in another form.

Fruitgrowers who wish to carry on under the existing conditions may

avail themselves of all the powers they now possess by adopting the Pools Act. It would be far less expensive, and doubtless more satisfactory for everybody concerned, for it cannot be denied that the circumstances attending its birth have been a fatal handicap to the Fruit Marketing Act.

#### **QUEENSLAND AND GRAPE IMPORTS.**

Following recommendations by the New South Wales Minister for Agriculture, certain modifications have been made in the regulation prohibiting the introduction of Grapes into Queensland from New South Wales except by sea route. The entry of Grapes from the Murrumbidgee irrigation areas via Wallangarra, is now permitted, provided a certificate is furnished by the grower, and also by an official inspector.

The grower's certificate must declare that the Grapes were grown in his own vineyard, that no phylloxera was known or suspected by him to exist in the vineyard or in the district in which the Grapes were grown; that no Grape vine foliage or wood is attached to such Grapes; and that such Grapes are contained in clean new packages not previously used for any purpose.

The inspector's certificate must declare that he had inspected the Grapes, and found them to be clean and free from disease, and that no phylloxera is known by him to exist in the vineyard or the district in which the Grapes were grown.

#### **QUEENSLAND.**

##### **Committee of Direction.**

A correspondent writes:—"Support has been gradually alienated by compulsory methods, also the glaring ignorance displayed re handling fruit, limitation of agents, one-floor systems, etc., including the holding back of rebates on freight. The barrow attempt bordered on the ludicrous.

Though accorded every possible avenue of making a success, the management has failed. The institution offers a very marked contrast to the Bowen Fruitgrowers' Organisation, which does not extend to the C.O.D. area and which unanimously decided to continue to conduct its own affairs.

"Remarks deprecating the C.O.D. are attributed to the interests of the agents; but as 70 per cent. of bananas sold in Brisbane are consigned to agents, the growers thereby ignoring what is termed 'their own' organisation, this evidences their appreciation of the position."



## CONFERENCE OF MINISTERS OF AGRICULTURE.

AT THE CONFERENCE of Ministers of Agriculture, held in Brisbane in June, at which all the States were represented, important decisions were reached in regard to the grading of fruit. The Fruit Committee, consisting of the Departmental Officers in charge of the fruit industry in each State, submitted recommendations in regard to marketing, export regulations, scientific research, bounties, and grading standards, all of which were accepted by the Conference.

### Export Grades for Apples and Pears.

It was decided that the Commonwealth Government be asked to amend the Export Regulations dealing with the grading of Apples and Pears, as follows:—

- (1) That the definition "Standard" grade shall include the words hail marks and sprays" after the word "caterpillars," and the word "or" before the word "caterpillars" shall be deleted.
- (2) That the Commonwealth Plain grade be amended as follows:—"Apples and Pears described as "Plain" shall consist of Apples and Pears of one variety and one size, free from broken skins and not seriously blemished or injured by any disease; but fruit slightly blemished by rubbing, black spot fungus, caterpillars, hail marks and sprays, may be exported, provided that the total area covered by such blemishes on any Apple or Pear does not exceed the area contained in a circle having diameter of half an inch. "Russetting of the surface shall not be deemed to be a blemish if the skin is unbroken. The diameter of Apples shall not in any case be less than two inches."

### Size Requirements.

- (3) That the Regulation No. 61(b) of Statutory Rules 22 of 1926, governing the sizing of Apples and Pears packed for export be amended as follows:—

"Apples and Pears must be sized into the following sizes:—

2 inches shall include fruit of two inches or greater diameter, but less than 2½ inches.

2½ inches shall include fruit of 2½ inches or greater diameter, but less than 2¾ inches.

2¾ inches shall include fruit of 2¾ inches or greater diameter, but less than 3 inches.

inches.

2¾ inches shall include fruit of 2¾ inches or greater diameter, but less than 3 inches.

3 inches shall include fruit of 3 inches or greater diameter, but less than 3½ inches.

3½ inches shall include fruit of 3½ inches or greater diameter.

Provided that in no case shall any Apples or Pears be less than the minimum size prescribed in Regulation 48 for each of the grades mentioned.

It was decided: (1) That in order standards for Interstate trade should be uniform with the Commonwealth Export Standards, with these proposed amendments.

### Standard Grades for Bananas.

The grade standard for Bananas as fixed by Queensland was adopted, other States concerned to enact legislation accordingly.

### Marketing the Prune Crop.

It was decided: (1) That in order to determine uniform grade standards for Prunes both for Australian consumption and for overseas, a Prune shall be defined as the dried product of the following varieties when the number of dried fruits to the pound does not exceed one hundred:—Prune d'Agen, Robe de Sergeant, Imperial, Fellenberg or Italian Prune, Splendor, Coates, Burton, Old French, Sugar.

(2) That the following grades be adopted:—

Below 40 to the pound—4-Crown.

40 to 60 to the pound—3-Crown.

60 to 80 to the pound—2-Crown.

80 to 100 to the pound—1-Crown.

(3) That the States interested in the production and marketing of Prunes undertake to subsidise any accredited Association which undertakes advertising or propaganda work having for its object the increasing of the consumption of Prunes.

(4) That the Federal Government be asked to embody these proposed grades of Prunes into their Export Regulations, and further, in view of the anticipated surplus in the near future, consider the advisability of guaranteeing the cost of packing and freight for all Prunes passed for export.

It was decided to ask the Bureau of Science and Industry to carry out research work in the control of codlin moth, with a view to finding a method of control which does not involve the use of arsenic. It was fur-

ther decided that each State be asked to carry out experiments with the same object, and that the information so obtained be interchanged between the States.

### San Jose Scale.

The Commonwealth Government to be requested to modify Regulation 46 of Statutory Rules 22, 1926, by deleting all the words after the word "scale" in the second line, making it read "fresh fruit shall not be exported if it be affected with San Jose scale."

### Export of Wine.

The Commonwealth Government is recommended to continue the export bounty on sweet wines for a period of five years from September, 1927, to September, 1932. Sweet wines are to be inspected by competent authorities before export.

## AMERICAN FRUIT CROP.

### Official Estimate for 1926.

The "American Fruitgrower Magazine" for July gives the Government estimate of the fruit crop in the principal producing States as at June 1st, 1926, compared with last season, and a five-year average.

In Apples last year the total U.S. production was 164,616,000 bushels. It is estimated that this year it will be 15 per cent. higher, or approximately 204,000,000 bushels. The principal Apple-producing State is Washington, which last year produced 28,700,000 bushels, and this year is expected to have over 30,000,000 bushels. Oregon, the next most important rival for Australian Apples, produced 5,400,000 bushels in 1925, and this year is expected to yield an additional million bushels. Last year's crop was below the average; it is anticipated this one will be nearly 10 per cent. above.

In Pears, the production last season for U.S.A. totalled 19,820,000 bushels; this year's estimate is 23,645,000 bushels, of which Washington is expected to contribute 2,829,000 bushels; Oregon, 2,032,000; and California, 8,279,000 bushels. Both these seasons are considerably above the average.

The Peach crop last year totalled 46,565,000 bushels for the whole country. This year it is expected to reach 58,640,000 bushels, of which California will contribute over 20,000,000 bushels, Georgia coming next with over 8,000,000 bushels. This is nearly one-third above the average for U.S.A., last season being slightly below.

# Tasmanian Fruitgrowers' Conferences.

A Record Gathering : Export Control Board Favoured.

TASMANIA'S principal primary industry is that of fruitgrowing: for several years past producers have suffered because of the incidence of Commonwealth legislation, interstate shipping strikes, culminating in the disastrous general strike and the coal strike in England when Tasmania's record export Apple season was at its height.

There was a record attendance of nearly 300 delegates at the Fruitgrowers' Conference at Hobart on August 11th. It was decided to favor the Control Board proposal for the export trade.

THE delegates included Sir Henry Jones and Sir John Evans, M.H.A., Hons. J. Murdoch and W. H. Calvert, Ms.L.C., Messrs. P. Murdoch, J. P. Piggott, H. H. McFie, and W. E. Shoobridge, Ms.H.A., members of the State Fruit Advisory Board, and leading fruitgrowers from many districts. The Director of Agriculture (Mr. F. E. Ward) was also in attendance. Mr. N. Campbell, M.H.A., chairman of the State Fruit Advisory Board, was in the chair. The Fruit Expert, Mr. P. H. Thomas, acted as Secretary to the Conference.

The Minister for Agriculture (Hon. J. Belton) said the present was a crucial period in the fruit industry. Production was satisfactory, but distribution was very unsatisfactory. The growers had big problems before them, and they could be sure of the fullest co-operation of the Government and its Department of Agriculture in efforts aimed at their elucidation. (Applause.)

## Fruit Advisory Board's Report.

In moving the adoption of the annual report and balance sheet of the State Fruit Advisory Board, the chairman said that the outstanding feature of the past season had been the disastrous effects of the general strike in the United Kingdom. He detailed the steps taken to alleviate the ill-effects. The Board had sought Federal assistance for growers, and were awaiting a reply from the Minister for Markets (Mr. Paterson). Regarding inter-State shipments, one of the outstanding achievements of the year had been to organise a representative body of selling agents in Sydney, and a representative of that body (Mr. L. Hay) was present. That organisation would do a great deal of good for the fruitgrowers of Tasmania, especially in guarding them from agents of doubtful financial standing.

Mr. A. Davies (Warden of Port Cygnet) formally seconded the motion, which was unanimously agreed to.

## Export Control Board.

Mr. Davies said the growers should have some control in London. It had cost Tasmanian fruitgrowers this year £30,000 to ship their 2,000,000 cases of fruit to England without reckoning freight and the commission to agents in England. That was more than the industry could stand. (Hear, hear.) The consolidated charges really amounted to 7½d. per case, yet growers were charged much more than that. He moved:—

That this meeting recommends that the Federal Government should pass legislation in regard to an Export Fruit Board as suggested by the conference of fruitgrowers in Melbourne on July 14, and that fruitgrowers be given an opportunity of making a decision by ballot regarding the Bill before it is brought into operation.

Mr. Hamilton seconded, pointing out that compulsion would be necessary to make the scheme a success.

Mr. Warner moved that the following be added to the motion: "Provided that representation on such Board is in proportion to the amount of fruit exported by the States."

The amendment was lost and the motion was agreed to by a majority of 270.

This resolution was also carried by a large majority at the Northern Conference, held at Launceston the following day.

## Codlin Moth Act.

The Director of Agriculture (Mr. Ward) gave a short address on the improvement of the fruit industry by experimental and demonstration work, and the centralised supervision of pests. This was too big a question to be parochial. The Codlin Moth control was a case in point. The Government, by the co-ordination of services, could do for a charge of a shilling an acre what different municipalities now charged amounts up to 6/- an acre. He appealed for the support of the fruitgrowers. Given that, the Department of Agriculture

could soon help them. (Applause.)

On the motion of Mr. Piggott, appreciation of the work of the Fruit Division was recorded, and it was urged that such work be extended throughout the fruit districts of the State, together with a more efficient supervision of orchard pests.

This matter was also introduced at the Northern Conference, and after considerable discussion, was carried by a large majority.

## Election of Advisory Board.

Nominations were asked for the election of five members of the State Fruit Advisory Board.

The following were elected:—Messrs. W. H. Calvert, F. J. Cole, A. Davies, T. J. Eddington, and B. J. Pearsall.

After considerable discussion it was agreed that the State Fruit Advisory Board should arrange a proper system of district representation, the producers' representatives elected that day to hold office for six months only, to enable this to be brought into operation.

It was pointed out that all growers not represented at the Conference were disfranchised.

At the Northern Conference Messrs. Neil Campbell (M.H.A.), J. H. Astell, and E. Reed were elected to represent Northern producers.

At the Northern Conference a reduction of freight for interstate markets was urged.

It was recommended that endeavours be made to eliminate unsuitable and unprofitable varieties.

The shipping companies are to be asked to make the reduction in freights retrospective.

Before the Conference concluded, a vote of thanks to Mr. Campbell for his services on behalf of the industry was enthusiastically carried.

The "Fruit World" is greatly appreciated. I am always looking forward for the next number.—J. B. Krieg, Tanunda, S.A.



## TASMANIA.

## Orchard Operations.

## Cultivation and Manuring.

September.

(By P. H. Thomas.)

THE FINE WEATHER that has been experienced will enable good progress to be made toward bringing the soil to a desirable tilth.

Soils which are inclined to be stiff or are of a retentive nature are better treated with the disc harrow in the early stages after ploughing. This is a useful implement, and if more generally used would considerably facilitate cultivation.

In order to secure the best results it is advisable to disc two or three times the same way as the plough furrows, before running at right

in order that the operation may be carried out whilst the soil is in a fairly moist condition.

## Re-working Fruit Trees.

This operation may be carried out during the month, as long as the scions remain in the dormant state.

Various types of grafts are in use but the "strap" and "rind" are the most satisfactory for old trees, especially those requiring a large surface to be "calloused" over. For young trees the tongue graft gives the best results.

A good grafting wax may be made by melting together the following materials:—3 lbs. of resin, 3 lbs. of beeswax, 2 lbs. of mutton tallow. If a softer or harder wax is desired the quantities of resin or tallow may be increased or decreased as necessary, the former being the hardening material.

A useful point which was omitted in last month's notes is that of sealing the tips of the scions with wax after they are in position. This prevents drying out and invariably results in a better "take."

## Spraying.

As soon as the different Apple and Pear varieties reach the "green tip" stage (generally during the first two weeks of September), treatment should commence for possible "black spot" development. This is one of the most important applications, as it prevents early infection.

Bordeaux mixture (6 lbs. bluestone, 4 lbs. lime, 40 gals. of water formula) is recommended, and can be applied to all varieties at this stage. This following the "contact insecticide" and "mildew" applications of August is the principal operation of the month.

Fruitgrowers should be in readiness with pump and materials to commence operations as soon as the trees reach the proper stage and the weather conditions are suitable—such work having precedence over all other operations.

Peach varieties which are likely to be attacked by aphis, should be treated with nicotine sulphate. This is applied as soon as the flower petals have fallen and again when the fruits are just formed. Cherries suffering from black aphis will also require similar treatment at the same stage of growth.

## Small Fruits.

Raspberries, Loganberries, and other cane fruits which are attacked by anthracnose (this occurs as small reddish-brown spots on the leaves and similar colored cankers on the main stems) should receive treatment with Bordeaux mixture, 6-4-40 formula. This is applied just as the leaves are

commencing growth, "green tip" stage.

Black Currant plantations affected by the "borer" will require careful examination and all branches infested cut out and burnt before the moths emerge from the chrysalids. Badly infested bushes are better grubbed out altogether.

Growers who have plantations not yet affected by the pest will require to keep a close supervision of the plants received for new areas, as this is the most common form of spreading the insect.

## THE ORCHARD SPRAYING OUTFIT.

(By P. H. Thomas.)

WITH THE INCREASE in nearly all centres of the diseases and pests which attack our commercial fruits, the spray pump is yearly becoming a more neces-

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angles or diagonally. This will assist to "pack" the soil surface, and is especially necessary after manures have been ploughed into the soil during spring cultivation.

The quicker acting chemical manure, such as sulphate of ammonia, nitrate of soda, sulphate and muriate of potash, may be generally applied during early September in the early stages of growth.

If the soil has already been brought to a tilth at this period they can be worked in by means of a disc. If otherwise, the better method is to broadcast between the rows, and plough under.

Green cover crops should now be "turned in" as soon as they have reached satisfactory development. If the soil upon which they are planted is likely to be retentive it will be advisable not to take risks of a dry season and sacrifice a little growth

sary factor to successful culture and production. Commencing in the dormant period, it is now often necessary to make applications of the different fungicides and insecticides right through the growing season.

When these facts are fully considered, it will readily be seen how the orchardist can be hampered in effecting satisfactory control measures by the use of an inefficient machine or one that is totally unsuited to the area.

Amongst the essential points to be considered in the choice of a spray pump are the following:—

- (1) An efficient and economic engine of sufficient power to deliver the spray at the rate required.
- (2) A strong and well-balanced carriage with broad wheels that will allow for convenient operation.

- (3) A pump in which the valves, compression chamber and plungers are readily accessible.
- (4) A good vat, preferably constructed of wood, that can be easily emptied or cleaned, and fitted with a good agitator.

When procuring a machine, the type and capacity should be decided by the orchard to be treated, and to a certain extent, by the diseases and pests which have to be combated.

In assessing the costs of production there is one item that stands out above all others, viz.: "labor." Implements and apparatus must be of a type that will allow the different operations to be carried out quickly and efficiently, and at the proper periods.

The latter is most important in order to secure an effectual control of the different insects and fungus pests commonly experienced in this State, a week's delay often making the difference between success and failure.

The orchardist who is content to employ a machine which is slow, and of insufficient capacity to treat the area at the required period, or that involves the use of extra or unnecessary labor will always be severely handicapped, especially in adverse seasons. It is as well to remember that under existing conditions the measures necessary for effectual pest control account for a large proportion of the costs of production, that such operations are in progress during the greater part of the year; the orchardist should give careful attention to all the points detailed and equip himself with the most satisfactory implement that embodies these and is most suited to his requirements.

Having determined the capacity of the machine needed, a selection may be made amongst the various types of outfit on the market. During recent years the manufacturers have given considerable attention to the improvement of orchard pumps, and to-day the orchardist is in the position to choose from a number of highly efficient machines.

Orchard spray pumps may be divided into three classes, viz.:—(1) The single action barrel pump; (2) the double action pump, which is fitted to a larger vat; (3) the motor driven pump. The former two are operated by hand power, although a machine after the type of Class 2 has now been placed on the market in which the power is supplied from an eccentric cog fitted to the axle of the carriage.

The barrel pump is chiefly used in small areas of orchards of one or

two acres, and is a convenient outfit for the farm orchard, or areas that are principally designed to provide fruit for home consumption. This type of machine is also suitable for operation in young orchards during the early years of development. Such areas are principally attacked by pests which do not involve the application of sprays within a short period, as during their younger stages they are generally not allowed to bear fruit.

An efficient barrel pump will deliver the spray material at approximately 60 gallons per hour, and allow the operation of one medium-sized nozzle at about 100 lb.-130 lb. pressure. The double-action hand power machines on the market are designed principally to facilitate the operation of this type of outfit. These generally are fitted with two cylinders, and will deliver the spray material at about 100 gallons per hour at a pressure of approximately 175 lb. This will enable two nozzles to be operated in a satisfactory manner, and is the type of machine in general use in bearing orchards, where a petrol driven output is not employed.

There is now a wide range of petrol driven spray pumps. The principal features to be considered are accessibility of working parts, sufficient power to operate according to requirements, and convenient and easy haulage. The latter phase is most important, the ideal machine being one that is designed to have the weight distributed when the vat is filled with spray material, so as to give an even balance for haulage.

The motor spray pumps that are generally favored in Tasmania range from  $1\frac{1}{2}$  to 5 horse-power. The former class will discharge the spray material at about 200 gallons per hour, whilst the higher-powered types can reach as much as 600 gallons per hour. Either of these machines will carry two nozzles, the higher powered outfits being necessary in order to effectually operate the new "gun" nozzle that has recently been placed upon the market.

In the older type machines different nozzles were supplied for different purposes; in some cases means of adjustment were provided by different sized discs, or a cock fitted so that the flow could be regulated, and reduce the aperture from which the spray is forced. These have now been generally superseded by a type of nozzle which is known as a "spray gun." There is no doubt that the "gun" has considerably simplified the practise of spray application. The chief features are that the pressure is retained until the liquid leaves the

"nozzle." The jet is controlled by a lever, which by a simple half-turn will give the operator command of a driving spray that will reach to the top of the highest trees, or throw a fine mist a few feet in front of the nozzle.

The "spray gun" has considerably improved the application of orchard sprays. Although the majority of growers who have used this innovation are satisfied as to its increased efficiency and economy, there are a number who, after a short trial, have discarded it and returned to the old style disc spray. Where such cases have been investigated, it has generally been found that the rejection has been brought about mainly through ignorance or inefficient operation. The "spray gun" opens up one or two problems in orchard spraying, and unless the grower recognises them and arranges his plan of operation accordingly, success cannot be achieved.

In some instances growers have tried to instal a "gun" upon a pump that has insufficient pressure. In order to obtain satisfactory results it is necessary that at least 200 lb. pressure be developed; anything below this will be inclined to waste the material and give inefficient operation.

Another important factor is to see that the spray is delivered through hose and piping that are of uniform calibre. Unless this is carried out a good deal of pressure may be lost in the application of the sprays, or bursts may occur in the piping or connections.

The "spray gun" delivers the material at a very high rate, and it is unnecessary to apply the methods of application that have been in practice with the disc nozzle. Instead of carefully running up and down the main limbs, the operator must cover the tree by directing the spray from the opposite angles. This involves a quickness of application above that necessary with the ordinary disc nozzle, and no time must be lost in getting from tree to tree whilst the spray material is being discharged from the pump.





## BORDEAUX MIXTURE.

### Importance of Proper Mixing.

WRITING in the "California Cultivator," H. R. Stanford, of Chaffey Junior College, says:—There seems to be a growing tendency to use Bordeaux mixture as a spray material for certain plants where a sulphur spray shows more or less injury. There are also some fungous diseases which are better controlled by Bordeaux than any other spray. For these reasons it is well to consider what characterises a good Bordeaux and how it may be secured.

Bordeaux depends for its fungicidal value upon the **caustic effect of copper compounds**. Free copper or copper sulphate are too caustic and must be combined with lime in the form of a fresh milk of lime or calcium hydrate, which reduces the caustic effect to a point where the leaves or fruits of many plants are not affected by it but it is still caustic enough to destroy the fungi which come in contact with it.

A proper mixture then will contain an excess of lime and no free copper. A very simple test to determine the presence of injurious copper consists in the addition to the spray material of a little of a solution of yellow prussiate of potash, potassium ferrocyanide. If there is no injurious copper there will be no visible change; if there is, a red precipitate will form. Sometimes a spray which shows a negative test will produce burning, but one which shows a positive reaction is sure to be injurious.

Of next importance to a chemical composition which will not be injurious, comes the **fineness of the particles** which make up the spray. Bordeaux is not a solution, but a suspension of particles, larger or smaller according to the conditions under which they form. It should be obvious that the smaller the particles are, the better the spray both for adhesiveness and for spread or the ability to cover the surface completely. Upon adhesiveness depends how often the spray must be repeated in order to give permanent protection; upon spread depends the efficiency of the spray after it is applied. The spores of fungi are tiny things, and the coating over the plant parts must be complete and even, if they are to be prevented from infecting. Coarse particles leave larger spaces between each other and may allow infection where smaller particles would not.

It is surprising how much difference the materials, and especially the manner of mixture, make in this mat-

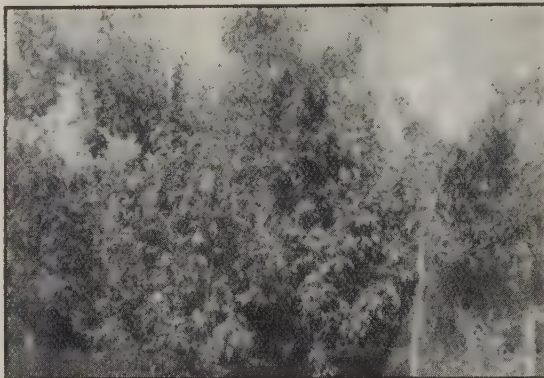
ter of size of particles. The standard method of making Bordeaux has been established after long and repeated trials of all different methods, and should be adhered to closely if best results are to be obtained. There is sometimes a temptation for the grower to depart from these directions in some detail which he thinks cannot make much difference, but which may be very important.

It is not the purpose to give here details of good Bordeaux but to emphasise the effect of even minor variation from that process. It will be necessary, however, to give the process as recommended in brief. It consists in first making a stock solution of copper sulphate in enough water so that a gallon of water will contain a pound of the copper sulphate. Quick lime is also slacked and more water added until a stock containing one pound of lime to a gallon of water is made. These concentrate or stock solutions will keep indefinitely as long as they are not mixed.

mixing small quantities in the different ways and then putting equal quantities into glass graduates and measuring the rapidity with which the material in suspension settles. The larger the particles the more rapidly they will settle to the bottom, and the smaller they are the longer they will remain in suspension. Thus settling becomes an index to the fineness of particles and so to the adhesive and covering quality of the spray.

Experiments emphasise the **importance of dilution before mixing**. None of the variations in mixing show up as well as the proper method. Neither of two dry preparations tested have anything like the smooth, fine consistency of the freshly prepared material. These dry Bordeaux compounds have had a good sale because of the saving in time through their use. They must show equivalent results if they are to be considered a good substitute for the freshly made Bordeaux.

Adherence to the exact letter of



GRANNY SMITH  
APPLE TREE  
in Mr. E. J. Sell's  
"Karonga" Orchard,  
Wallendbeen, near  
Young, N.S.W.  
yielding 24 bushels.  
Five trees in row  
yielded 104 bushels

When a spray is desired, the stocks are each diluted to the strength desired in the spray and then poured together while being stirred. A Bordeaux of deep blue color and very fine consistency should result. This method requires several mixing tanks, two for the stock, and two for the dilutions. The final mixing is usually done in the spray tank with agitator running.

Variations in the process sometimes attempted are usually in order to save so many tanks. One might decide to mix the proper amount of the two concentrate or stock solutions in the tank and then fill up with water thus saving two dilution tanks, or to dilute one but not the other, thus saving one of them.

It is easy to demonstrate the effect of these variations of methods by

the directions is essential to the production of the very best Bordeaux mixture. Failure to control pests by spraying is so often due to faulty preparation of the spray that the utmost care becomes necessary on the part of the person who is making the material, and seemingly unimportant details of manufacture should be carefully considered as they may be the very things that mean success.

### ADVERTISING BANANAS.

Messrs. Elders and Fyffes Ltd., Bow-street, London, W.C., recently conducted a huge educational advertising campaign in regard to Bananas. Essays, some of remarkably high quality, were received from 40,000 competitors. The slogan has been adopted, "They must be ripe."

# New South Wales.

## News and Notes.

### FRUIT BEVERAGES.

#### Must be True to Name.

An important decision in N.S.W. was given recently by the Law Officer (Mr. Gordon Castles) in regard to an application for the use of a trade mark containing the words "crushed Lemon." The application was refused, on the ground not only of probable confusion with the previously registered trade mark of an American firm, but that the applicant company's product described as "crush Lemon" did not contain the juice of a Lemon, but admittedly had a citric acid basis.

The Acting Registrar said:—"Had the evidence disclosed that the mark

### SYDNEY:

Fruit Commission  
Merchants Agents

**S. & M. Greenberg**

No. 1 Store

Fruit Markets, Sydney

Also at Melbourne Markets

Tasmanian Shipping No. 161.

Victorian Shipping No. 42.

**PROMPT RETURNS**

was being used and applied to beverages made from crushed Lemon or other crushed fruit, the position might be held to be different, but as such beverages are not, in fact, made from crushed fruit, and do not contain even the natural juice of crushed fruit, I am forced to the conclusion that the mark is a deceptive mark, and that its use would mislead the public into the belief that the goods have as a component part either crushed fruit or the juice of crushed fruit."

N.S.W. AGRICULTURAL BUREAU.

**T**HE AGENDA for the Fourth Annual Conference of the N.S.W. Agricultural Bureau, held at the Hawkesbury Agricultural College from July 27 to 30, was comprehensive, and included a motion for

the amendment of the constitution, election of officers, and dates for district conferences. Addresses were delivered by Mr. Clayton, Agricultural Instructor, on "Special Fallowing Systems"; by a railway officer on "Railway Charges," by Mr. A. A. Watson on "Producers and Consumers' Conference"; by Mr. Harper, Chairman of directors of Westralian Farmers Ltd., on "The Essentials of all Co-operative Organisations"; by Mr. M. L. Kingdon, on "Horse Improvement"; by Mr. H. Bentley on "Development of Agricultural organisation in Queensland During the Past Twelve Months"; by Mr. Bate (Bodalla) on "Power Farming"; by Mr. J. Whittet on "Pasture Improvement work"; by Mr. A. H. McDonald, Superintendent of Agriculture, on "The Control of Noxious Weeds"; by Mr. J. J. McLeod, Senior Forester, Windsor, on "Forestry and its Relation to Agriculture"; by Mr. W. Cattinach, Chairman Victorian State Rivers and Water Supply Commission, on "Supply of Water for Domestic and Stock Purposes"; by Dr. Finlay on dairying matters, and by Mr. E. F. Lone on "Goats."

### EXTENSION OF TOMATO GROWING.

The Tomato-growing industry is increasing in importance, and two new factories for the production of tomato sauce are being erected at Bathurst, N.S.W. One of the factories will also make pickles, and a supply of Onions and Cucumbers will be required.

Mr. A. J. Pinn, Senior Agricultural Instructor, stated recently that pickling Onions were being grown at the Bathurst Experiment Farm. Tests of imported Tomato seed were also being made with a view to discovering the most suitable variety for the conditions.

Special attention had been given to the Norton variety of Tomato, and selections had been made with a view to its suitability for pulp. This variety had already proved most suitable for the conditions at Bathurst. Associated with a good yield were the other qualities of meatiness and color, combined with little waste from the core and from uneven coloring at the stem-end.

Mr. Pinn also mentioned that another factory for the manufacture of

Tomato pulp is being established at Windsor, and should be ready to receive the summer crop. The factory at Richmond belongs to the same proprietary, and is capable of handling about 2,000 tons of Tomatoes during the season.

### WHITE ANTS IN FRUIT TREES.

The liability of fruit trees to white ant infestation of central western N.S.W., where the rainfall may be deficient for a season or two, is one of the handicaps to orcharding on any extensive scale. Where, however, water is available in times of such shortage the white ants are not a serious problem.

At a meeting at Gilgandra, at which Mr. W. le Gay Brereton gave a lecture on "Spraying," states the "Sydney Morning Herald," some of the local men mentioned a method that keeps the pest in check. This is to split up boards of softwood (such as packing-cases), bore a small hole 5in.

### HAMBURG

(GERMANY).

**Ph. Astheimer**

And Sohn,

Fruit Brokers . .  
and Auctioneers

(GERMANY)

Established 1863.

Largest receivers of Australian,  
Tasmanian, and American  
APPLES.

Foreign Apples a Speciality.

or 6in. up the centre, fill this with white arsenic, and plug up the hole. Three or four of the strips thus treated are placed round each tree, and the ants attacking the softwood in preference to the tree eat through the plug, and are thus poisoned. The opinion was expressed that this was effective in keeping the pest under control.

### YOUNG CO-OPERATIVE FRUIT-GROWERS.

Orchardists at Young, N.S.W., following the lead of the soldier settlers, have formed a co-operative society for the marketing of their fruit. Their object is to co-operate in organised effort to standardise, grade and market the fruit as far as possible as one collective unit. The directors of the company are Messrs. A.



S. Wickham, J. Stewart, F. H. Hopwood, M. Jasprizza, B. Cunich, J. D. Hunter and E. B. Treatt.

### SHOULD CHERRIES BE "FACED"?

The proposal of some growers to cease the "facing" of Cherries is regretted by the Sydney wholesale trade. The "faced" Cherries, i.e., where the top row stands out in neat array, no stalks showing, always look well. Needless to say this is not "topping" (the placing of choice

Mr. Matthews uses glass traps, and states the best results have been obtained by the use of Harvey's fruit fly lure.

The secret of successful trapping is to keep the traps clean and free from any odor other than of the lure. Hence it is advisable to wash the traps twice a week regularly. Mr. Matthews considers it a mistake entirely to abandon trapping at this season, as by keeping a few traps working growers are able to tell any movement that may be made by the flies, and immediately prepare to control them. Every fly killed now will be worth fifty trapped in September.

In winter the traps are placed in a sunny position; in summer, in the shade.

### BATLOW PACKING HOUSE.

Continued satisfactory progress is indicated by the balance sheet presented at the half-yearly meeting of Batlow Packing House Rural Co-operative Society recently. The retentions loan repayment fund and the rebate retention fund now amount to £3,359, the sum considerably exceeding the uncalled capital or overdraft at the bank. The trading accounts show a largely increased turnover, with a credit balance on the fruit-packing account of £182/1/-, the case-trading account of £455/14/1, and the goods-trading account of £128/11/6. The profit and loss account shows an expenditure of £1,288/5/9 for the half year.

During the past six months 57,000 cases of fruit have passed through the shed, of which 23,503 cases were disposed of for £12,220 to country orders and direct sales, and 33,479 cases for £14,322, through Sydney agencies.

### A SOUTH AFRICAN VISITOR.

A recent caller at our office was Mr. R. L. Blatt, of South Africa, a brother of Dr. Redvers J. Blatt, whose article on the "Apparent Scope and Limitation of Co-operative Marketing," recently published in the "Fruit World," created favourable comment.

Mr. Blatt is on his way to America to study the co-operative system of handling fruits, and also fruit packing. Mr. Blatt stated that the fruit export control system in South Africa was not yet in working order. There was no unanimity of opinion in regard to this method of operation. The principal port for export is Cape Town, smaller quantities being sent from Durban and Port Elizabeth. Mr. Blatt stated that the fruit industry of South Africa has increased of late

years to a position of considerable importance, and the best endeavours of all connected with the industry are being used to bring about efficient co-operative methods. The main development has been in the citrus fruits.

## SHIP YOUR FRUIT TO Gerald Da Costa



Head Offices—  
Floral Hall, Covent Garden,  
LONDON, W.C.2

Importers and Distributors of  
all kinds of English, Colonial  
and Foreign Market Produce

### BRANCHES:

COVENT GARDEN, W.C.2.  
8, Russell Street.  
524, Central Avenue.  
Stand, 151, English Flower Market. Stands, 31, 32, Foreign Flower Market. Apple Warehouses, Jubilee Market.  
Tel.: Gerrard, 868 and 5786.  
Telegrams: "Geracost, London."  
Stands, Nos. 151, 152 and 153.  
Spitalfields Market, E.1, and 54 Brushfield Street, E.1.  
Telephone: Avenue 8804.  
Telegrams: "Spitacost, London."  
Apple Warehouses:  
Church Passage, Spital Square, London, E.1.  
3, 4 and 5, The Arcade, Borough Market, London, S.E.1.  
Telephone: Hop, 3373.  
Telegrams: "Borocost, London."  
G.N.R. Potato Market, King's Cross, N.1.  
Telephone: North 1482.  
Telegrams: "Kincrocost, London."  
13 & 17 Victoria Street, Liverpool.  
Telephone: Central 888.  
Telegrams: "Giveracost, Liverpool."  
(Facing Commercial Sale Rooms.)  
Deansgate, Manchester.  
Telephone: Central 7156.  
Telegrams: "Geracost, Manchester."  
17, Humber Street, Hull.  
Telephone: Central 4041 Y.  
Telegrams: "Geracost, Hull."  
Southampton Docks, (Facing No. 45 Shed).  
Telephone: Southampton 2610.  
Telegrams: "Geracost, Southampton."  
Eclipse Yard, Westgate, Mansfield.  
Telephone: Mansfield 440.  
Telegrams: "Geracost, Mansfield."

No practical short cut to prosperity is within the power of government. Neither the appetite nor the digestive power of the world is going to be increased by statute.—"San Francisco Chronicle."

"As a fruitgrower I am very much interested in your paper. Wishing you every success."—G. Brown, Williamstown, S.A.

## MARGETSON & CO. LTD.

### Fruit Importers & Salesmen

30 James St. and James  
St. Warehouses,

11 Neal St.,  
COVENT GARDEN  
LONDON, W.C.

and at  
Jamaica House,  
9 & 10 Botolph Lane, London, E.C.  
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Sales by PRIVATE TREATY.  
Prompt Returns & Settlements  
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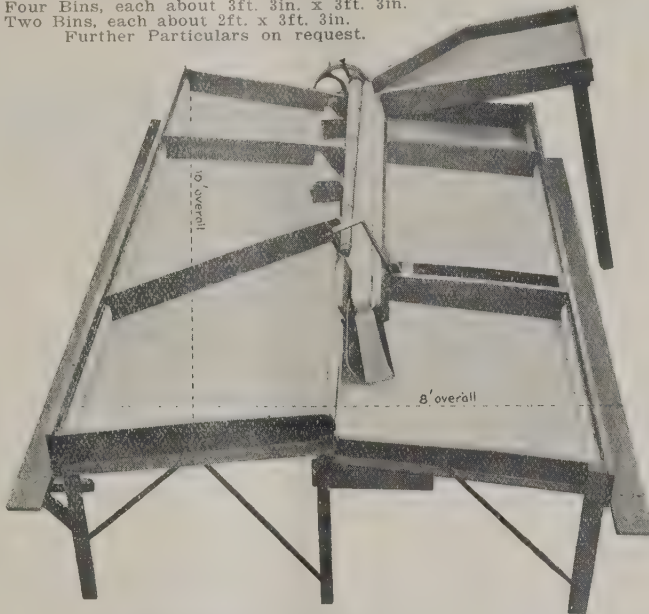
Shipping Nos.  
431 and 432

fruit on top and poor quality underneath). No, it is simply the fruit greeting the prospective buyer with a smile.

### TRAPPING FRUIT-FLIES.

Working in conjunction with the Hawkesbury Agricultural College, Mr. K. Matthews, of Woodbine, Grose Vale, N.S.W., has been very successful during the past 18 months in controlling fruit fly on citrus, pome, and stone fruits by means of trapping. Trapping, to be of economic value, must be practised by all growers in infested areas, otherwise breeding-grounds are left,

"Lightning" Junior, with Packing Bins attached.  
Four Bins, each about 3ft. 3in. x 3ft. 3in.  
Two Bins, each about 2ft. x 3ft. 3in.  
Further Particulars on request.



## LIGHTNING FRUIT GRADER CO.

Cable and Telegraphic Address: "Lightning," Melbourne

THE . . .

## "Lightning" Junior Fruit Grader

—Built Specially for You

It is no experiment, but the developed product of many years work, and the tested result of many hundreds of "Lightning" Graders in actual use.

Among many other Models the "LIGHTNING JUNIOR" will be exhibited at the Melbourne Royal Show on Stand No. 65, Plummer Avenue.

It will pay you to inspect this before your season commences. Its principal features are:—Cheap, Good, Accurate, Very Large Bins, Sound Construction, Simple to Operate. Fitted with the "Lightning" Genuine Solid Rubber Roller.

Cash Price of Unit only, £23/10/-,  
F.O.R., Melb. (without Packing Bins).

5 HODDLE STREET, COLLINGWOOD  
MELBOURNE, VIC.

(2 Doors from Victoria Parade)

### PLANTING BANANAS.

Bananas are planted at all seasons of the year, but October is considered the best month in this State, as the growth is much more rapid with early spring plantings than with later ones.

One of the most important points in the growing of Bananas, and one to which very little attention is given by the majority of growers is the selection and the treatment of suckers for planting. One hears a great deal about seed selection, say, of maize and wheat, and of increased crop returns and general improvement arising from any little attention to the matter, but one does not meet many Banana-growers who recognise how largely the careful selection of suckers affect the future life of the plantation, not only in regard to the yield of fruit, but more particularly in regard to freedom from disease.

Most growers know that the sucker with greatest vigour is the one with a good bulb and with small, narrow leaves; this type of sucker is always a good grower, and always produces a good bunch. The size of the sucker is not of so much importance as the size of the bulb. The bulb is simply food stored away, and therefore the larger the bulb the larger the amount of food there is for the plant to use to tide over the shock of removal and replanting, as well as in the produc-

tion of fresh roots in its new home.

Always reject suckers with poor bulbs and trunks of uniform girth, and select only those with good bulbs and tapering (or "bottle-shaped") trunks; by so doing you will obtain vigorous plants and will make the best of the soil and weather conditions. Of course, one of the most vigorous plants of all is the old butt with all but one eye pruned away; a plentiful supply of food is assured by the old butt, and the young plant, besides overtaking larger suckers in the matter of growth, produces a larger and better bunch, and at a time when prices are good.

It is a mistake to split the butts into four and six "sets" or "slips," as some do, for the effect is positively to check vigorous development, and also to expose a large surface to fungus invasion. The less cut surface there is the less liability to fungus and bacterial attack.—"Queensland Agricultural Journal."



GIBBS, BRIGHT & CO.—See Page XIV

Prepared Spray Mixtures.—Most of the preparations used by fruitgrowers in spraying to combat the various insects and fungus pests are purchased in prepared form by orchardists who prefer that the spray compounds should be scientifically compounded by trained chemists.

In emphasising the quality of the "Yarra" brand arsenate of lead (paste and powder), lime sulphur, red oil, copper-soda, benzole emulsion, Messrs. Parsons and Jaques direct the attention of fruitgrowers to the fact that they are a firm of trained chemists, Mr. Jaques being the pioneer manufacturer of lime sulphur, manufactured in Australia, having devoted his time to producing high quality spray mixtures, which are of economic value to the community.

Messrs. Parsons and Jaques have their spray manufacturing business at 6 Patterson Street, Abbotsford, Victoria, and would be glad to answer any enquiries by growers. Their advertisement will be seen on page 416.

"We find the "Fruit World" a highly instructive and valuable paper, a necessity to the orchardist who wishes to keep pace with the times." Page Bros., Wentworth, N.S.W., 25/6/26.



# A Quality Sprayer

*The Cooper Outfit at Stand 44 at the Royal Show*

THE Melbourne Royal Show once more offers to the Australian fruitgrower and vigneron an opportunity of inspecting the various improvements in the mechanical contrivances suitable for orchard spraying. Although it would appear, at first sight, a simple matter to construct a Spray Outfit, many orchardists have learned by experience that more than ordinarily good qualities need to be built into an Orchard Spray if it is to give the fullest degree of satisfaction.

Probably no other farm machine is called upon to stand up to such rough, hard work. Out in all sorts of weather conditions, and with corrosive spraying mixtures constantly showered upon it, pulled about over rough, broken ground, and up and down steep inclines, it is a matter for a considerable amount of careful study to produce a machine capable of giving universal satisfaction.

Many spraying machines have been manufactured, but certain it is, that

none have ever rivalled the Cooper "Perfect Balance" Sprayer, or threatened its supremacy as the world's best spraying machine. The 1926 model, in particular, represents a great advancement.

This Outfit is exhibited at Stand No. 44 Lennon Avenue, and visiting fruit men and vigneron would be well advised to spend a little time in an inspection of the many valuable and patented features contained in the Cooper.

For the purpose of putting the finishing touches to the design and construction of their outfit, the Cooper manufacturers early this year arranged for six of the oldest Cooper outfits in use to be brought in to Melbourne for a searching inspection and overhaul. Their object was to find out whether there were any signs of weakness or lack of durability that had not been overcome in previous improvements. The 1926 model was designed in the light of the experience so gained, and is undoubtedly

capable of standing up to more years of hard work than any sprayer ever before produced.

The number of machines which are daily despatched to the Goods Yards at Spencer-street for consignment to districts right throughout Victoria, shows the keen appreciation of orchardists for the Cooper Outfit.

It is certain that both old and new features will create enthusiasm and praise, and the announcement that the new sprayer is to be exhibited at the forthcoming Royal Show will be welcomed by all fruitgrowers who will be visiting Melbourne.

A record attendance is expected daily at Stand No. 44, which is in Lennon Avenue, opposite the Sheep Pavilion, and which will undoubtedly form a rendezvous for orchardists and vigneron from all parts of the Commonwealth whose keen criticism and frank opinions will be well worth hearing.

## At the Melbourne Royal Show

SEE FOR YOURSELF

THE SPRAYER you have  
heard so much of

It will be worth your while to learn all about the latest ideas embodied in the Cooper "Perfect Balance" Outfit.

STEP ALONG TO STAND 44  
Opposite the Sheep Pavilion

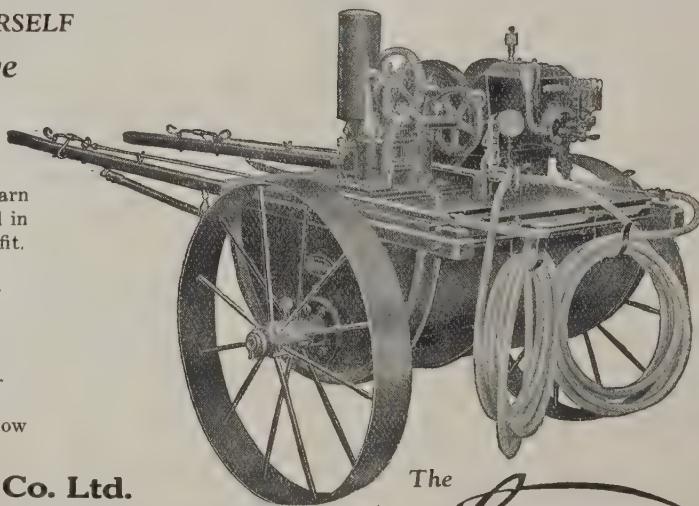
If you cannot see it at the Show  
write to

**Cooper Engineering Co. Ltd.**

350-358 SPENCER ST., MELBOURNE

129-131 SUSSEX STREET, SYDNEY

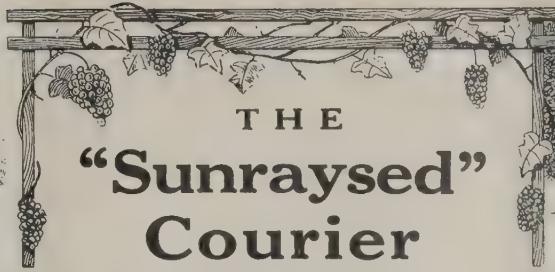
AGENTS IN EVERY STATE



Design Patent  
No. 10915

The

*Cooper*



## THE "Sunrased" Courier

### DRIED FRUITS WEEK.

Victoria's Publicity Effort to Assist  
the Industry.

**D**RIED FRUITS WEEK, a State-wide campaign, organised and directed by the Victorian Dried Fruits Board, will be held from August 30 to September 4. In it State retailing and other associations are specially co-operating.

Many hundred specialised window displays will be made by grocers in Melbourne and the largest country towns; cafes will serve attractive dried fruits dishes, and desserts, as part of their regular menus; confectioners will display the fruits in various attractive confection forms.

The aim of the week is to increase the Victorian sales of locally-grown dried fruits, and so assist the heavily burdened industry, and the hundreds of repatriated soldiers dependent upon it.

If each Australian would consume another few lbs. of locally produced dried fruits annually, the problem of the dried fruits industry would be solved; a moderate prosperity guaranteed to it, and to the many hundred repatriated Australian soldiers it engages. Briefly, such a description would mean the local absorption of the greater part of the Australian production of 40,000 tons a year.

To-day such absorption totals only 12,000 tons, leaving the balance to be exported overseas and enforcedly sold at under-production cost prices, in numerous cases, against the similar products of Mediterranean, and other cheap-producing, cheap-standards nations.

It is this fact which has necessitated the Federal and State Governments controlling the industry in order to stabilise prices.

A position somewhat similar to the present threatened in pre-war days, but its acuteness then was tempered considerably. The then

#### total annual production

did not exceed the total local demand by any great proportion. Approximately the excess was 25 per cent.,

and, even when this was sold at a loss on overseas markets, the loss was allowable for in the profits made on the sale in Australia of the remaining 75 per cent.

To-day, however, the position is worse than reversed owing to the vast new areas of Murray Valley lands thrown into production, largely as repatriation settlements for returned Australian soldiers. Local absorption while it has steadily increased, now represents only 30 per cent. of the total annual crop, leaving 70 per cent for export.

To enable any loss on this percentage to be balanced by the profit on the proportion sold in Australia, a big increase would be necessary in the prices charged the Australian consumer. This would be definitely opposed to the decision of the industry to safeguard rigidly the interests of such consumers—its best customers—this decision being best exemplified by the war-time action of the industry in fixing the Australian selling prices at big reductions to the prices then obtaining overseas, and forcing a sufficient quantity of dried fruits to supply Australian requirements being kept in the country.

In view, therefore, of the obvious impossibility and undesirability of increases being imposed, the Commonwealth and States' Governments have come to the assistance of the industry, and are now endeavouring to provide remedies for the position in which it is.

Unfortunately, these remedies and their application have still to be determined and proven.

For the present all efforts are for the revivifying of the industry in which is involved the prosperity of Victoria more than that of any other State.

In Victoria the growing areas of the industry total more than 23,000 acres, as against 16,953 for South Australia, the next largest producing State.

In both States the industry is spread along the Murray River Valley. It is almost totally dependent upon irrigation, and its establishment has transformed the hot valley lands

from practically arid wastes, into fertile areas, capable of the most intensive culture. From this start enormous future developments are possible. The construction of the Hume Reservoir and the locking of the Murray is speedily progressing, and will provide for such development, as the finalisation of this giant undertaking, embracing, also locks on the Murrumbidgee, will enable many thousands of acres of new lands to be brought under culture. The cost of the works will total £10,000,000. The consequent future settlement of these areas will be enormous, once (and providing) markets are procurable for their produce.

Such is the vision . . . the transformation of a vast, arid desert into an

#### Eden of rich production,

supporting a healthy, financial, and eager, white population; new big river towns and wealth-producing new secondary industries.

And to speed of the transformation of the vision to fact, each and every citizen can help.

How, Dried Fruits Week will explain. It will preach the lesson of how, from small beginnings, great works are made possible. It will show how future developments of national import will follow the present aiding of a vital industry.

Chiefly, however, it will aim at increasing the per head local consumption of Dried Fruits by stressing the remarkable food, tonic and other properties of the fruits; their startling superiority over all other foodstuffs for the increasing of health, and in nerve, brain, and body-building and maintaining.

#### Dried Fruits Week, Aug. 30 to Sept. 4.

Special Dried Fruits items will be a feature of the menus in the dining rooms of members of the Licensed Victuallers' Association, and in metropolitan cafes, restaurants and railways dining-rooms.

The Retail Grocers' Association is organising 500 decorated window displays, featuring Australian Dried Fruits, in shops in Melbourne and the chief country towns.



The Victorian Railways Department are making special efforts, and are distributing 10,000 special booklets of raisin recipes from all railway refreshment rooms. These rooms will concentrate on boosting the sales of Raisin bread and giant calico posters bearing Dried Fruits Week slogans will be prominently hung on the facades of the city railway stations. Space is also being given on railway hoardings for the display of the special posters issued by the Dried Fruits Board to advertise the Week.

Radio broadcasting of the daily programmes for the Week is being carried out through 3LO. From this station also will be daily broadcast three five-minute "Fruity Talks." They will be given at lunch-time, at 3 p.m., and each night. The afternoon "Talks" will be specially given for housewives and will deal with the use of dried fruits in preserving and household cookery. The afternoon speakers will be Miss A. Knight, fruit preserving expert to the Department of Agriculture, and Miss F. Pell, supervisor of Domestic Arts Cookery, to the Department of Education. The nightly speakers will include representatives of the Federal and State Ministries, the Returned Soldiers' Association the State Rivers and Water Supply Commission, which controls soldier settlement, and the State Department of Agriculture.

Cookery demonstrations have been arranged, to demonstrate the uses of dried fruits, in all Domestic Arts schools and by the cookery experts of the Metropolitan Gas Company. The company's experts will give their demonstrations at the various suburban Town Halls.

The press everywhere will actively assist in spreading the propaganda for the week, and in educating the public in its moral obligation to the returned soldiers and the industry which has trained and settled them.

#### DRIED FRUITS CONTROL BOARD REPORT.

A REPORT regarding the activities of the Dried Fruits Export Control Board, issued by the Minister for Markets and Migration, indicates that the whole of the surplus production for 1925 was disposed of overseas, prices for Sultanias being satisfactory, but for other fruits not so good. Prices realised in the United Kingdom this year, however, are encouraging.

Already 3,330 tons have been sold, of which 2,451 tons Sultanias averaged £72/5/- per ton, 815 tons Currants averaged £47/4/- per ton and 64 tons Lexias averaged £41/5/- per ton.

Advantages claimed to have been secured by the Board are reductions in overseas freight, preferential trade with Canada, and the establishment of organised marketing overseas. Excellent results have followed the advertising campaign conducted in the United Kingdom.

#### Variation of Levy.

The report states that the net collections on dried fruits exported from July 1, 1925, to June 30, 1926, amounted to £29,224/19/7, representing levy at the rate of one-eighth of a penny per lb. on 25,049.98 tons of dried fruits exported from the Commonwealth.

The Board recommends that consideration be given to amending legis-

lation to permit of the rate of levy being varied for the several varieties of fruit, especially in view of the poor returns realised for Currants and Lexias as compared with the rates realised for Sultanias.

The quantity of dried fruits harvested for the season 1925-26, and processed to June 30, 1926, was 33,143 tons, comprising 18,602 tons Sultanias, 12,062 tons Currants and 2,479 tons Lexias. It is estimated that the quantity available for export to all markets will be 23,000 tons, including 13,000 tons Sultanias, 9,000 tons Currants and 1,000 tons Lexias, of which it is probable 20,000 tons will be exported to Great Britain and 2,000 tons to New Zealand.

The total revenue of the Board for the period ending June 30, 1925, was £18,359/10/9, and for the year ending June 30, 1926, £29,774/7/10, of which £27,629/7/- was carried forward. The Board has decided to accumulate a fund towards the expenses of the joint publicity scheme now being carried out in Great Britain, in association with the dairy and canned fruit industries, towards which the Federal Government has granted £50,000.

#### DRIED FRUITS.

##### Australian Quota Increased.

On August 16, the Chairman of the Victorian Dried Fruits Board (Mr. J. M. Balfour) announced that it had been decided to increase to 60 per cent. the proportion of the Lexia crop which could be sold upon the Commonwealth market. The quotas for Currants and Sultanias would remain the same as at present

## Corkscrew Steel Fencing Posts

All previous defects associated with Iron Posts eliminated

#### FIREPROOF. WHITE ANT PROOF.

Owing to the corkscrew construction of these Posts, they have a tremendous grip in the ground, and it is only necessary to drive them in 16 inches, in practically any kind of soil. We suggest using about a 5lb. hammer for the purpose. The Posts are bored to specification without extra charge. It is necessary to use the ordinary wooden strainers.

#### THE MAIN FEATURES ARE:

**PERMANENCY.**—The Posts will last a lifetime, and will also ensure the Wire lasting a similar period.

**INDESTRUCTIBILITY.**—The Posts are unbreakable, and their flexibility and resiliency enable the fence to maintain its true position, even after being subjected to pressure. The fact that a single post will bend when not in the fence is not a detriment, but we claim it to be one of its greatest merits, as any other iron or steel post of somewhat similar size is liable to fracture when subjected to pressure, which is impossible with the Corkscrew Post. This Post when bent can just as easily be straightened again without injury to the post.

Obtainable from—

Sole Agents for  
N.S.W.

The Commonwealth Wool & Produce Co. Ltd.

#### CHEAPNESS OF RAIL TRANSPORT AND HAULAGE CHARGES.

The Posts are carried at the same rate as fencing wire on the railways, viz.: 2 tons or over, "A" Rate; 1 ton, "E" Rate; under 1 ton, 1st class. For a distance of, say, 300 miles, the rates would be:—

|                 |         |         |
|-----------------|---------|---------|
| "A" .....       | £2 7 6  | per ton |
| "B" .....       | £3 7 6  | "       |
| 1st Class ..... | £6 14 2 | "       |

At "A" Rate the cost per post would be approximately 1d. for the above distance. These posts can be despatched with wire netting and fencing wire to make up minimum quantities to save freight.

#### CHEAPNESS AND QUICKNESS OF ERECTION.

The saving in this item will be found to be enormous.

#### PRICES AND WEIGHTS:

5 feet, about 4½lbs. (500 to ton), 1/6 each. 5 feet 6 inches, about 5 lbs. (450 to ton), 1/7½ each. F.O.R. Sydney. Longer Posts can also be supplied.

Station Supplies Department (1st Floor)  
3 Bent Street, SYDNEY

—20 per cent. and 30 per cent. respectively. This decision had been reached after consultation with the South Australian Dried Fruits Board, and the quotas would, therefore, be the same in each State.

### DRIED FRUITS.

London (5/8/26).

Sales of Australian dried fruits in Great Britain, recorded with the London agency of the Commonwealth Dried Fruits Control Board for the week ending August 5, represented 66½ tons Sultanias, at an average price of £71/9/- per ton; 123½ tons Currants, at average price of £41/19/- a ton, and 6½ tons Lexias, at average of £41/2/8 a ton. These sales bring the total realisations to date to 2,743 tons Sultanias (£71/19/2 per ton), 1,090 tons Currants (£45/18/5 a ton) and 86 tons Lexias (£41/5/6 a ton).

The London agency reports that a severe depression prevails in the market as a result of the prolonged coal strike, which is now affecting employment in all other trades. In consequence it has been deemed advisable to reduce slightly the valuations for Currants.

### DEATH OF C. J. DE GARIS.

#### Suicide by Gas Poisoning.

Clement John De Garis is at rest at last. He committed suicide on Aug. 17th at Mornington, Victoria, by inhaling gas fumes. After closing the doors and windows, and methodically plugging up the cracks, he lay across the gas stove and turned the taps on. He was 41 years of age, and leaves three children by his first wife, whom he divorced, and one child by his second wife.

Thus closes the meteoric career of a man who was a popular athlete, land salesman, fruitgrower, manager of Australian Dried Fruits Association publicity propaganda, airman, playwright, financier, author.

He had a big vision, but tripped over finance. Possessing a winsome, compelling personality, there were always to be found people to trust him with finance.

After the Kendenup crash, the Melbourne sub-divisions crash, his projected suicide by drowning at Mentone, disappearance and return from New Zealand, he steadily set to work in Geelong to retrieve his fallen fortunes, and was successful. Was the pace too slow? There came dreams of vast fortunes in oil, which did not materialise, and De Garis killed himself.

There are many who will be the

poorer for the loss of De Garis, but this will be tempered by the knowledge that he meant well.

Mr. J. L. Tuckfield, of the "Lightning" Fruit Grader Co., has just returned from a visit to the Murrumbidgee Irrigation Areas, N.S.W., the Gosford packing shed, and surrounding districts. Mr. Tuckfield, who has long made it his business to do everything possible to help the fruit-growers, made this trip for the purpose of ascertaining on the spot exactly what are the requirements of growers. He has acquired a number of new ideas, which he hopes to be able to put to practical use shortly. Mr. Tuckfield has been successful in securing reduced freights over the railways for fruit grading machines. In Queensland, for instance, he has

arranged for graders to be carried at the very lowest rate available whereas formerly they were carried at second-class rate. In other States similar concessions have been made.

### RECORD FRUIT CARGO FROM SOUTH AFRICA.

A cargo of deciduous fruit from South Africa, totalling 258,000 packages, states the "Imperial Food Journal," was, during May, landed at Southampton. This is easily the biggest single consignment of first-class fruit that has yet been imported from any part of the Empire. During the present season it has been estimated that the total quantity exported will exceed 2,000,000 boxes—over ten times the quantity exported in 1910.



### This Booklet

which was compiled primarily to advertise

## SULPHATE OF AMMONIA

gives a wealth of information concerning fertilisers generally, and its circulation has helped considerably in the education of the orchardist to a better-paying fertiliser practice. Many copies have been circulated to students of agriculture and horticulture throughout the Commonwealth and New Zealand, and some significance must be attached to the greatly increased sales of Sulphate of Ammonia since its publication

Fruitgrowers visiting the Royal Show should make a point of calling at the Sulphate of Ammonia Stand, No. 248 Staughton Parade

"Productive Fertilisers" is yours for the asking

The Australian Sulphate of Ammonia Propaganda Committee  
360 Collins Street, Melbourne



## To get Something Out of your Garden you must Put some work in to it!

But if you use the right Tools you get better results with less work! We stock a full range of the latest and best Tools, Sprays, Pumps, etc., for Orchard and Garden Work.

### YOU CAN RELY ON ALL THESE GOODS

**SPADES**—We have a large Range of Spades. In

Prices ranging as follows—

2/9, 3/6, 4/6 and 7/9.

Ladies' Spades, 4/- each.

**DIGGING FORKS**—With strong Wood "D" Handle. 4 Prongs, 5/6, 6/3, 7/3; 5 Prongs, 6/6, 7/9, 9/-.

**LADIES' FORKS**—3 Prong, 4/3; 4 Prong, 4/6.

**WEEDING FORKS**—Short Handle. 4 Prong, 1/5; 4 Prong, Long Handle, 1/10.

**RAKES**—Steel, with stout Handle—

|       |     |     |     |           |
|-------|-----|-----|-----|-----------|
| Price | 10  | 12  | 14  | 16-Teeth. |
|       | 4/6 | 5/- | 5/6 | 6/-       |

**GARDEN TROWELS**—Short Handle, 1/-, 1/6; Long Handle, 1/9.

**DUTCH HOES**—Stamped, 5 in., 1/1; 6 in., 1/2; 7 in., 1/4. Solid, 5 in., 2/6; 6 in., 2/6; 7 in., 2/9.

**GARDEN HOES**—Handled, Swan Neck, 3/3 each.

**NORCROSS CULTIVATORS**—The "Norcross" is a wonderful little tool.

You can use it as a Cultivator, or, by reversing the Prongs, it can be used as a very efficient Potato Digger! Price, "Midget," 2/-; 3 Prong, 3/9; 5, 5/-.

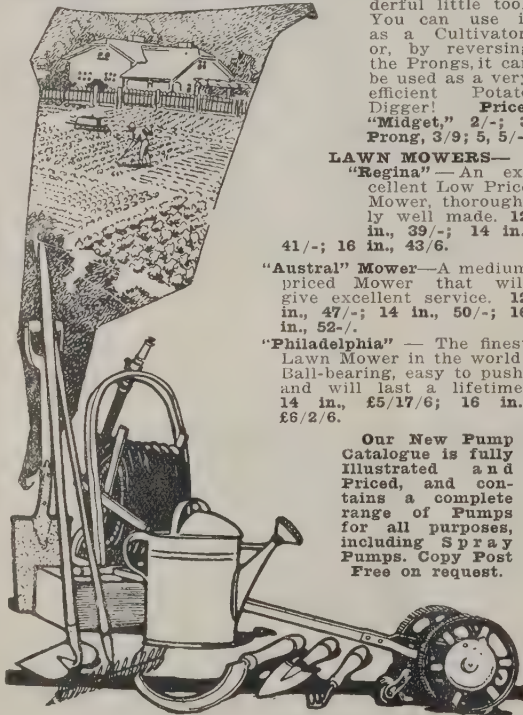
### LAWN MOWERS—

"Regina"—An excellent Low Price Mower, thoroughly well made. 12 in., 39/-; 14 in., 41/-; 16 in., 43/6.

"Austral" Mower—A medium priced Mower that will give excellent service. 12 in., 47/-; 14 in., 50/-; 16 in., 52/-.

"Philadelphia"—The finest Lawn Mower in the world! Ball-bearing, easy to push, and will last a lifetime. 14 in., £5/17/6; 16 in., £6/2/6.

Our New Pump Catalogue is fully illustrated and Priced, and contains a complete range of Pumps for all purposes, including Spray Pumps. Copy Post Free on request.



**McPherson's**  
Proprietary Limited

582-592  
Collins St. Melbourne

## Classified Advertisements.

### Wanted and For Sale.

Prices for Advertisements under this heading are as follows:—

Casual Advertisements, one to six words, 2d. per word. Contract Advertisements, twelve months, 1½d. per word.

The proprietor of Australian Patent No. 1979, dated 28th May, 1921, for "Method of and Machine for Applying a Coating to Cans," will dispose of the whole or part interest in the Patent or grant licenses on ROYALTY and invites tenders in respect of same in order to fulfil the full requirements of the trade and the public. Address enquiries to

PHILLIPS, ORMONDE, LE PLASTRIER & KELSON, Patent Attorneys, 17 Queen-street, Melbourne, where drawings and specifications may be obtained.

### POTASH FOR FRUIT TREES.

Potash, one of the most important of the essential plant foods, is largely lacking in Australian soils. The absence of supplies for a period during the war caused considerable alarm to orchardists, who have learnt by practical experience its value for all classes of fruit.

The principal commercial sources of potash at the present time are the Alsatian potash mines, which are now shared between Germany and France.

The best results are obtained from potash, states a bulletin issued by the proprietors of "Sun" Brand Sulphate of Potash, when used in conjunction with other manures, so as to form a complete plant food for the particular crop in question. These include phosphoric acid and nitrogen, while lime is of great value for its effect on the mechanical condition of the soil, and in helping to render the plant foods available. Most important, of course, is cultivation; the soil must be in good tilth, well drained, and amply supplied with humus before the application of chemical fertilisers can be of real benefit.

All fruits contain a large percentage of potash, and its value in their cultivation has been proved by practical experience as well as scientific tests. Different varieties of fruit like different proportions of potash, but as a general all-round fertiliser the following proportions have been recommended:—Sulphate of potash, 20 per cent.; superphosphate, 45 per cent.; bonedust, 15 per cent.; sulphate of ammonia, 20 per cent. The well-known "Sun" Brand Sulphate of Potash is advertised on page 433 of this issue.



The "Eclair" Spraying Fruit Trees.

FOR

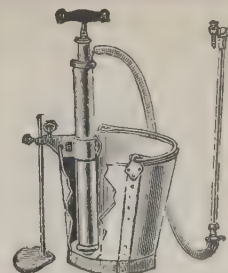
## SPRAYING, LIMEWASHING AND DISINFECTING

RELIABLE AND EFFICIENT MACHINES ARE ESSENTIAL

Before Placing Your Order ASK A FRIEND

WHO HAS USED A

**VERMOREL "ECLAIR" SPRAYER**



— TO TELL YOU HIS OPINION OF IT — ACTUAL USE IS THE BEST TEST —

The types made include the following:—

HAND SPRAYERS  
PNEUMATIC HAND SPRAYERS  
KNAPSACK SPRAYERS  
PNEUMATIC KNAPSACK SPRAYERS  
BUCKET PUMPS

BUCKET SPRAYERS  
SINGLE WHEELED SPRAYERS  
TWO WHEELED SPRAYERS  
CART SPRAYERS  
AUTOMATIC HORSE DRAWN SPRAYERS

POWDER BELLOWS  
KNAPSACK POWDER  
SPRAYERS  
AUTOMATIC HORSE DRAWN  
POWDER SPRAYERS

LIQUID CAPACITIES  $1\frac{1}{2}$  pints to 88 gallons.

PRICES FROM 4/- each.

The above types include machines for Spraying Trees, Bushes, Ground Crops, and for applying Limewash, Whitewash, Distemper, Waterpaint and Disinfectants

Ask your local Merchant for full particulars, or write for catalogue and leaflets to:—

**COOPER, PEGLER & CO. LTD., 24d CHRISTOPHER STREET, LONDON E.C.2**

## Answers to Correspondents

### Pear Root Aphis.

S.B.J., Shepparton East, Victoria, writes:—"As I have some twelve-year-old W.B.C. Pear trees affected with root aphis, I would be obliged if you can supply me with any information re combating same. Cyanide has been suggested as a cure for trees that can be lifted and treated, but I am at a loss how to apply any chemical to mine."

Answer (by J. M. Ward, Superintendent of Horticulture):—Officials of the Department conducted experiments for the control of root aphis in 1925, a report of which appears in the November issue of the "Journal of Agriculture" for that year.

It is very doubtful whether the effective treatment of full-grown trees is practicable, as the aphis can be found on roots over the whole orchard. Paradichlorobenzine would appear to be the chemical most likely to give satisfactory results. The results of experiments and dosage, etc., are given in the article referred to.

It would appear that the only practicable way of combating this pest is the working of trees on *Pyrus calleryana* stock. Action has been taken by the Department to introduce this stock from Japan.

Answer (by A. F. Thiele, Doncaster):—There is no known remedy for the Pear root aphis; so far we have not even the life history of it. The Horticultural Department should investigate the matter. I think that the only thing is to find a blight-proof stock.

### Re-Working Keiffer Pears.

"G.S." Hastings, Vic., writes:—If it is not too late, I should like to enquire whether it is better to graft or bud young 5-year-old Keiffer Pear trees, which I desire to rework to Packham's Triumph; also what is considered best variety to interpolate them?

Answer (by E. Lawford, Doncaster):—Five-year-old trees are rather old to bud, so as to make a good tree by the process, as the buds would have to be placed on the branches, and thus be too high from the ground. My advice is to graft below the branches, from one foot to fifteen inches from the ground. If rind grafting is the method adopted, it can be done up to the time the buds are well open if the scions are cut at once, and heeled in so as to retard development. In case of any grafts missing, the young growth could be budded next February.

I do not know that the best variety to pollinate the Packham has yet been decided upon, but a number of varieties bloom at the same time, from which a choice could be made.

Answer (by H. W. Davey, Chief Orchard Supervisor, Vic. Dept. of Agriculture):—Re grafting of Keiffer Pears, I advise grafting, as the grafts will be a season ahead of the buds. Grafting of Keiffer should be done immediately. If too late to graft, budding should be done in February.

Packham's Triumph is usually self fertile, but Winter Nelis and Josephine are reciprocal pollinators with Packham's Triumph.

### Grafting Apple on Pear Stocks.

C.W.C., Dalveen, Queensland, asks:—Could you inform me if Apples are grafted on to Pear stock (i.e., seven years old Pear trees cut down), will said Apples bear well? A few have been grafted in this district, and the grafts (Gravensteins) have taken well, but I would like to know if they will bear well.

Answer (by A. F. Thiele, Doncaster):—Apples may be grafted on Pear stock, but they will never make good strong trees. The trees I tried were not satisfactory, though they carried some very fine fruit. If they were mine I would not waste time on them, but rather plant Apple stocks.

Answer (by J. H. Lang, Harcourt):—I have had no experience, but would not advise the practice.

### Fumigating Lemons.

Mr. W. A. Webb, Doncaster, submitted some Lemons which had been fumigated, and wished to know if the scales had been killed.

Mr. C. French, jr., Government Entomologist, after examination, stated that the scales were all dead.

### Spreaders and Bordeaux Formula.

A correspondent from Ringwood, Vic., asks:—(1) Do spreaders increase the efficiency of sprays? (2) What is the best spreader for Arsenic



sprays? (3) What is the correct formula for Bordeaux mixture?

Answer (by A. F. Thiele, Doncaster).—

(1) I have never used any spreader; have always had good results without. Thoroughness and the time of spraying are the secrets of success.

(2) I have not used any spreader for arsenic sprays.

(3) We always use the 9-6-80 formula for winter spraying, and should it be necessary to spray again when the fruit is on the trees, I would use 8-8-80. It is very rare that we have to put on a second spray for the season.

Answer (by J. M. Ward, Supt. of Horticulture).—

(1) Yes, spreaders add to the efficiency of sprays;

(2) Flour properly prepared is an effective spreader, but casein is better and more easily prepared. Casein spreaders can be purchased ready for use. The home-made spreader is made by placing 2½ gallons of water in a large saucepan or convenient vessel; then add 2 ozs. of Greenbank's caustic soda; bring to boil, and then add, while stirring, 20 ozs. of powdered casein. Let simmer for a few minutes. When cool, bottle in 10

quart bottles. Use 1 quart to 80 gallons of spray mixture.

(3) The standard Bordeaux mixture is 12 lbs. of bluestone, 8 lbs. of fresh lime to 80 gallons of water. American (U.S.A.) formulas give 12.8.100, but 100 American gallons is equal to 83 1-3rd Imperial gallons, whilst the Avoirdupois weight is the same as ours.

#### "ARSINETTE."

One of the recently developed Australian industries is the manufacture of Arsenate of Lead powder from arsenic mined and refined locally. Messrs. Wm. Cooper and Nephews (Aust.) Ltd. have an extensive arsenic mine and refinery at Ottery, Tent Hill, N.S.W., where they have established an up-to-date factory equipped with the most modern plant and machinery. They anticipate exporting large quantities of their product, which is known as "Arsinette," to other countries. This spray-material is said to be particularly effective for both Apples and stone fruits. Directions for using are given in Messrs. Wm. Cooper and Nephews' advertisement, which appears on page 389 of this issue.

#### REMOVING ARSENIC MARKS.

##### Americans Instal Wiping Machines.

To remove arsenic spray residue on Apples, the Okanogan Growers' Union at Okanogan, Wash., will instal five fruit-wiping machines to cost 2,500 dollars, in its central packing shed.

Box labels will show that the fruit has been wiped and the organisation will capitalise the feature. It is thought that in some cases it will be possible to command a premium price.

The wiping machines will be installed just ahead of the fruit grading machines. In the wiping process, the fruit will pass over horizontal revolving rollers and be slapped by 500 pieces of canvas. The machines are electrically driven and are provided with a fan to remove dust and debris.

#### FRUIT CANNING.

##### F. J. Tuckfield's Factory to be Turned into a Co-operative Company.

It will be of interest to growers of canning varieties of fruits to hear that the firm of F. J. Tuckfield Pty. Ltd., of Cromwell Street, Collingwood, Victoria, will in future be working on co-operative lines.

This will mean that growers not at present working under the advantages of co-operative effort will have an opportunity of doing so under favorable conditions.

The present company is not a large one, judging by comparison with other co-operative factories, its capacity being somewhat less than 1,000 tons of fruit per season. However, its lack of capacity has added to the opportunity for closer supervision during the packing season, resulting in an exceptionally high-class product and very high percentage passed as export quality, oversea buyers expressing entire satisfaction with the quality and grading.

It is understood that machinery and plant of the latest design and practice were installed previous to last season, and the factory brought right up to date in efficiency of operation and reduction of working costs.

Growers who wish to avail themselves of this opportunity of preference in the sale of their fruit—growers who are shareholders having this first preference—should get into touch by letter for further particulars with the present firm of F. J. Tuckfield Pty. Ltd., 107-111 Cromwell Street, Collingwood, as half of the new capital has already been subscribed.

## Use the right Spray at the right time to obtain the best results

### THE "YARRA" BRAND

The cheapest, most effective and economical fruit sprays  
on the market

Our Mr. Jaques, being the Pioneer in Australia in the manufacture of Lime-Sulphur, has devoted his time to perfecting best methods to produce efficient sprays of all sorts.

|                                                            |              |
|------------------------------------------------------------|--------------|
| ARSENATE OF LEAD PASTE—Tins in cases, 2/60lb.              | 8d. per lb.  |
| ARSENATE OF LEAD POWDER—Tins in cases . . . .              | 1/8 per lb.  |
| LIME-SULPHUR—Approx. 40/42 gallon drums or casks . . . . . | 1/3 per gal. |
| RED SPRAYING OIL—40-42 gallon drums or cask . .            | 3/- per gal. |
| SPECIAL COPPER-SODA MIXTURE—2/50lb. tins in case . . . . . | 8d. per lb.  |
| BENZOLE EMULSION—40lb. tins . . . . .                      | 8d. per lb.  |

Full line of Chemicals, Lubricating Oils, Greases, Paints and Brushes, etc., Prices and Particulars on application.

## PARSONS & JAKUES

Manufacturing Chemists

6 PATTERSON STREET, Abbotsford, Vic.  
155 YARRA STREET,

# Cold Storage of Fruit.

## A Profitable District Investment.

Privately Owned Stores are also Successful.

**A Review of the Operations of R. Werner & Co. Ltd., Richmond, Vic.**

**A** COOL STORE for fruit is now recognised not only as a valuable adjunct, but an essential part of the equipment of any progressive fruitgrowing district. While this statement has applied so far with particular force to the Apple-growing districts, the value of cool storage has become increasingly apparent in the irrigation areas where large quantities of Pears and Peaches are grown for canning. The canning factory which possesses its own cool store has a wonderful advantage, for the canning season can be spread, thus eliminating waste, preventing gluts, saving freight to and from distant cool stores, and allowing the factory management to operate more smoothly.

Experiments conducted by the Departments of Agriculture in the several States clearly demonstrate that Oranges and Lemons can be successfully stored for several months. Experiments are still being conducted to determine which varieties have the longest storage "life," and as to which district produces fruit best suited for storage. When gluts are likely to occur with citrus fruit in the markets of capital cities, cold storage is freely availed of to spread the marketing season. The question naturally arises as to the possibility of cold stores in the citrus producing areas, exactly on the same lines as the successful stores in the Apple and Pear producing districts.

The fact that Victoria possesses so many fruit cool stores, both district co-operative concerns and stores on private properties, is largely responsible for the healthy position of the hard fruits industry in the State mentioned. A recent estimate placed the fruit cold storage capacity of Victoria at 1,300,000 cases. So important has this become that a Fruit-growers' Cool Stores Association has been formed. Conferences are held regularly, when technical matters and matters of policy are keenly debated, to the benefit of all concerned.

Cool storage has been the principal factor in stabilising markets. In the cool store development the co-operative spirit has been seen to best

advantage. While Victoria has taken a lead in the direction of cool stores, other States have not been slow to follow suit. Thus, in the principal Apple-growing areas of South Australia, Western Australia, and New South Wales, cool stores have been erected. New Zealand, too, is well equipped with cool storage accommodation, the value of which is fully appreciated in the Dominion.

### Cool Storage in Tasmania.

Well-informed opinion in Tasmania is to the effect that that State is on the eve of considerable developments

mittee, a study of the best system of refrigeration, machinery and equipment, the share capital to be subscribed, and the amount to be paid on each share being decided.

On matters of detail regarding plant and equipment, full advice is available from the well-known firm of cold storage engineers, Messrs. R. Werner & Co. Pty. Ltd., of 80 Burnley-street, Richmond, Vic., who have made a special study of refrigeration, and whose machinery is installed in up-to-date stores throughout the Commonwealth and New Zealand.



Type of Cool Store erected in Victoria.

in relation to cold storage. If more cool stores were erected, it is understood that the marketing season could more effectively be spread, and that the mainland markets would, in consequence, receive more of the high quality and delightfully-flavoured Apples for which Tasmania is noted.

### Co-operative Stores.

Finance is available for the erection of cool stores, either through private banking concerns or through the Governments. The usual method is the calling of a meeting, the appointment of a representative com-

At the Melbourne Royal Agricultural Show, Messrs. Werner & Co. have a stand at the corner of McCracken Avenue and Lobb Street, where they will be glad to welcome those interested, and to give estimates and other information in respect to fruit storage.

In the exhibit of orchard produce displayed by the Department of Agriculture, a "Werner" plant may also be seen in operation.

Visitors will be cordially welcomed at the Company's workshops at Burnley-street, Richmond,



## ATOMOL DUSTS LIMITED

MANUFACTURERS OF DUSTING MATERIALS TO BE USED AS INSECTICIDES AND FUNGICIDES ON ALL PLANT LIFE.



**ATOMOL DUSTS LIMITED** is an embodiment of a movement for the practical application of scientific discoveries in the realm of Plant Life and the fulfilment of requirements in accordance with the highest standard that scientific research is able to provide.

**GROWERS CAN PLACE THE UTMOST CONFIDENCE IN THE PRODUCTIONS OF ATOMOL DUSTS LIMITED.**

**THE TWO MOST IMPORTANT FEATURES CONNECTED WITH THE MANUFACTURE OF HIGH QUALITY MATERIALS ARE:—**

1. Fineness is Essential. The Construction of our plant makes it impossible for any coarse material to be present in our finished product. 200 mesh is our standard; that is about twice as fine as wheaten flour.

2. They must contain the correct active ingredients. Nothing has been left to chance in this respect. The staff actually producing the materials are fully **QUALIFIED CHEMISTS**. Each packet will be plainly marked with percentages of active ingredients contained therein.

The following Dusts are now available:—

Apple and Pear, Nos. 1, 2, 3, 4, 5 and 6. These Dusts are designed to combat Apple Scab, Red Spider, Codlin Moth and all Chewing Insects.

Grape Dust, Nos. 1 and 2, for Oidium, Downy Mildew, and Black Spot.

Grape Dust, No. 3, for Cut Worm and Chewing Insects.

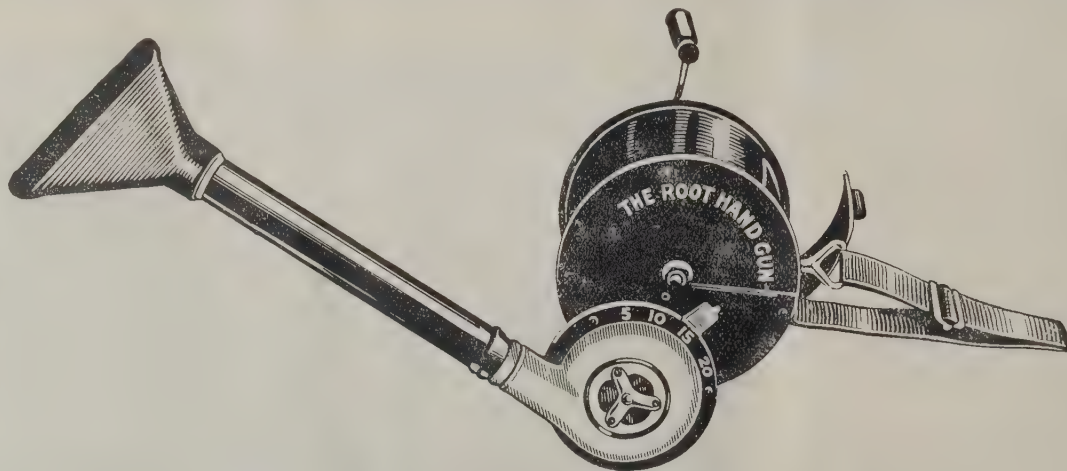
Tomato Dust, Nos. 1, 2 and 3.

### MECHANICAL APPLIANCES.

#### SOLE DISTRIBUTORS OF ROOT DUSTING MACHINES FOR AUSTRALIA.

In addition to the dusting materials, we have secured the sole Australian agency for what is easily the best available dusting appliance. It is the only machine that has a positive feeding device. **These machines are patented throughout the Commonwealth, and cannot be copied.** They consist of three (3) types:—Saddle, Tractor, Hand Dust Gun, and a smaller one for the Home Gardener.

**"ROOT DUSTERS"** are the latest development in dusting machinery. The heart of any dusting machine is in the feeding mechanism. The **IMPROVED ROOT FEED** is entirely new, and gives splendid results. This Gun can be adjusted to distribute as low as 1 pound of poison to the acre and **DO IT RIGHT**.



#### SPECIAL ATTENTION IS DIRECTED TO THE ROOT HAND GUN (Patented).

1.—It operates easier than any hand duster on the market.

2.—Runs on ball bearings packed in grease.

3.—The gears are bronze (wide flanged), and also packed in grease.

4.—The gun requires no lubrication during its life.

5.—Perfect balance—easy to carry and operate. Weighs only 9½ pounds with hopper empty.

6.—The discharge tube can be raised or lowered for high or low plants. This feature always permits the operator to stand in an upright and comfortable position.

7.—Hopper will carry from 7 to 10 pounds of poison depending on density.

8.—Does not discharge poison in "chunks" and "gobs."

A shipment is due to arrive in Australia on or about the 1st September, and will be available about the following dates:—Brisbane, 1st September; Sydney, 8th; Victoria and Tasmania, 12th; South Australia, 14th; and Western Australia, 18th of September. Indications are, that the whole of this shipment is likely to be taken up soon after arrival.

but thoroughly breaks it up and dusts it evenly and uniformly.

9.—CAN BE ADJUSTED INSTANTLY TO DISCHARGE ANYWHERE FROM ONE TO TWENTY POUNDS OF POISON PER ACRE. THIS FEATURE IS A WONDERFUL IMPROVEMENT IN HAND DUSTERS.

10.—Can be taken apart and easily repaired.

11.—Built to stand hard knocks and rough usage.

12.—The detachable rubber nozzle will not corrode, bend, or rust. The nozzle of a hand duster receives more abuse than any other part of the gun.

13.—The only Hand Gun that permits swinging of the discharge tube from in front to the rear of the operator.

**AGENTS REQUIRED FOR NEW SOUTH WALES and WESTERN AUSTRALIA. SEND FOR PAMPHLET ON DUSTING APPLIANCES AND DUSTING MATERIALS.**

## ATOMOL DUSTS LIMITED,

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ADELAIDE, S.A.

By Appointment to

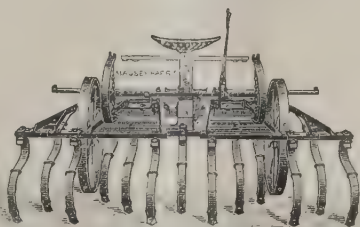


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GRADE

## FARM ORCHARD and VINEYARD MACHINES

are Famous for Superior Service



### 9 Tooth Cultivator.

This cultivator is adapted to a variety of work, being useful as an ordinary field cultivator and for use in vineyards, and with the attachment, which can be supplied, may be used for furrowing or ridging. For orchard work, extensions can be furnished which cultivate under the overhanging branches of the trees.



### No. 2 Scuffer.

A very strong, light, easily handled Scuffer. The handles are adjustable in height, and can be set sideways so the user can work close to the row without walking on finished work or scratching his hands on berry bushes, etc.



### Grape and Berry Hoe.

An excellent implement for the cultivation of Grapes, Berries, Peaches, Plums, and small trees of all kinds. It can be adjusted to different widths of rows and the horse hitches to the side of the pole, out of the way of vines and bushes.



### Orchard Disc Harrow.

It is reversible - covers the roots or not as you wish. The gangs are interchangeable in their position on the frame so as to throw the soil to or from the trees and vines. Adjustable for different depths of cultivation, in the middle or at the ends, by means of gang hinges.

The four implements above are part of the Massey - Harris complete line of Orchard and Vineyard Implements. Let us send you particulars

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# MASSEY-HARRIS COMPANY Ltd.

MELBOURNE — SYDNEY — BRISBANE — ADELAIDE — PERTH — CHRISTCHURCH

Agencies Everywhere.



## New Zealand.

Interesting Notes and Comments : Cool Storage Development.

### NEW ZEALAND INSTITUTE OF HORTICULTURE.

THE N.Z. INSTITUTE OF HORTICULTURE is moving along by leaps and bounds, progress being manifested everywhere. The conference in August promises to be a mile-stone, as it will mark a forward step educationally. It is expected that arrangements will be made then for the granting of Diplomas on a 4-years' successful course.

The following are a few of the lectures which are being arranged in various districts:—"The City Beautiful: What Town Planning and Planting can Accomplish"; "Manures and Manuring, with special reference to the suburban garden"; "Fruit Trees for the Home Garden"; "Trees and Plants for the Sea Coast and Exposed Situations"; "Native Flowering Plants for the Garden"; "Soil Amelioration"; "Plant Propagation"; "Bacteriology of the Garden."

### PROPOSED FRUIT VARIETIES' CONFERENCE.

The N.Z. Department of Agriculture has agreed to arrange another conference of fruitgrowers, nurserymen, the Institute of Horticulture and the Horticultural Officers of the Department, regarding fruit varieties and the classes most suitable for different purposes in the respective districts. The work of previous conferences will be considered, also new varieties, suitability for local and export markets, susceptibility to disease, re-working, etc. A profitable time is expected.

### N.Z. FRUIT COOL STORES.

The Director of Horticulture, N.Z. Dept. of Agriculture, has supplied the following list of fruit cool stores in New Zealand showing the capacity in bushel cases of each. He states that a considerable extension has been

made during recent years in the matter of cool storage accommodation for fruit, especially in the chief commercial fruitgrowing districts of the Dominion.

### List of Fruit Cool Stores in New Zealand, 3/8/26.

|                                                       | Bus. Cases |
|-------------------------------------------------------|------------|
| Auckland Farmers' Freezing Co., Auckland—             |            |
| Auckland Plant . . . . .                              | 100,000    |
| Southdown Plant . . . . .                             | 50,000     |
| Horotiu Plant . . . . .                               | 70,000     |
| Radley & Co., Auckland . .                            | 10,000     |
| Turners & Growers Ltd., Auckland . . . . .            | 25,000     |
| Westfield Freezing Co., Auckland . . . . .            | 35,000     |
| Gisborne Sheepfarmers' Frozen Meat Co., Gisborne . .  | 20,000     |
| Hawkes' Bay Fruitgrowers Ltd., Hastings . . . . .     | 25,000     |
| C. H. Slater Ltd., Hastings .                         | 32,000     |
| Hastings Manufacturing Co., Hastings . . . . .        | 25,000     |
| Elite Bacon, Ice and Cool Storage Co., Hastings . .   | 16,500     |
| H. G. Apsey & Co., Hastings                           | 7,000      |
| W. Sisson, Hastings . . . . .                         | 1,100      |
| J. H. Heinmann, Havelock North . . . . .              | 7,000      |
| Webster Bros., New Plymouth . . . . .                 | 3,000      |
| Hawera Cool Stores, Hawera                            | 2,300      |
| Manawatu Farmers' Freezing & Bacon Co. Ltd. . . . .   | 2,500      |
| W. A. Tate, Greytown . . .                            | 7,000      |
| Roberts Trading Co., Wellington . . . . .             | 3,000      |
| Harbour Board Cool Store, Wellington . . . . .        | 50,000     |
| Nelson Cool Store, Nelson . .                         | 3,000      |
| Maitland Cool Store, Nelson                           | 6,000      |
| Nelson Freezing Co., Stoke, Nelson . . . . .          | 40,000     |
| Appleby Cool Store, Appleby, Nelson . . . . .         | 16,000     |
| Buxton & Co., Nelson . . . .                          | 9,000      |
| Motueka Cool Store, Motueka, Nelson . . . . .         | 40,000     |
| Mapua Cool Store, Mapua, Nelson . . . . .             | 16,000     |
| Canterbury Orchardists' Co-op. Ltd., Christchurch . . | 20,000     |
| Christchurch Fruit and Produce Co., Christchurch . .  | 8,000      |
| Dominion Cool Stores Ltd., Christchurch . . . . .     | 35,000     |
| N.Z. Farmers' Co-op. Assn. Ltd., Christchurch . . . . | 3,500      |
| F. Sisson, Papanui, Christchurch . . . . .            | 26,000     |
| E. Sisson, Papanui, Christchurch . . . . .            | 2,000      |
| Wardell Bros., Christchurch                           | 2,500      |
| Tonkin & Co., Dunedin . . .                           | 2,500      |
| Crystal Ice Co., Dunedin . .                          | 5,000      |
| H. Turner, Ettrick, Otago . .                         | 4,500      |

Total . . . . . 730,400

## WISKEMANN SMITH

& CO. LTD.

Specialists in

**NICOTINE 95/98%**

**NICOTINE SULPHATE 40%**

Strength and Quality Guaranteed  
at Competitive Prices

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**POTASH (Industrial & Fertilizing)**

Invite enquiries from responsible  
houses in every State in Australia  
also New Zealand with a view to  
Sole Representation

CABLE NOW FOR PRICES

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**WISKEMANN, LONDON**

Wool Exchange, London, E.C.2, England

## "New Record" Land Clearing Machinery for Orchardists.

### Engines and Sprays.

ON the majority of holdings coming into occupation, and many that have been worked for years, but are still in process of development, there is still a great deal of clearing work to be done. All over Victoria one will see large areas of ring-barked country about which big timber still stands, despite the ordinary periodic firing adopted. And, side by side, may be found big stretches of hill and dale carrying dense clumps of green trees that, besides having no commercial value as milling logs, actually depreciate the grazing worth of the holding on which they stand.

Such conditions exist because the land-owner may not have either the time or capital to clean up his country as he desires.

brought to perfection a drag-saw that will meet every demand made upon it in regard to the cutting down of trees, and the sawing up of logs and stumps. It is known as the "New Record," motor cross-cutting saw, and the work that it has accomplished since it has been before the public is a revelation of efficiency.

The following is a list of the various "New Record" cross-cutting and circular saw outfits.

The 2 h.p. "New Record" motor crosscut saw which will cut any log up to 7 ft. diameter (the engine on this outfit will pull a small chaffcutter or circular saw). If more power is wanted for such purposes as pumping, milking machines, etc., the same outfit as above can be supplied with a 3½ h.p. engine.

The petrol consumption for cutting all day with the "New Record" does not amount to one gallon.

Clearing for orchard planting done in a similar way should prove quite satisfactory, and the Tree Clearing Machinery Co. Pty. Ltd., are prepared to give a free demonstration on any property in Victoria.

The "New Record" oil engines are now recognised as the strongest, most efficient, and durable oil engines that can be produced. These engines are used for very rough work, such as sawing outfits and concrete mixers, but are equally suitable for lighter work and are used extensively for lighting plants, separators, milking machines, etc., where smooth running is essential.

The "New Record" fruit spraying outfits have been built to last and resist corrosion. The porcelain lined cylinder, pressure regulator outside



From time immemorial the thing most desired by every employer of labor has been to find some mechanical means that could lessen costs and afford greater efficiency in creative effort.

It comes by good fortune for the farmer who has bush clearing work to be done, that, at this juncture, there is on the market a machine that will save him the necessity of employing large numbers of men and will do more work than human hands can accomplish at far less cost. The Tree Clearing Machinery Co. Pty. Ltd., 112 Rosslyn-street, West Melbourne, have

A very ingenious tree-felling apparatus can be attached to these machines in less than a minute, and standing trees can then be cut down in record time. The "New Record" will cut trees down from the usual height to level with the ground, making the ground ready for cultivation with stump jumping implements. Hundreds of acres have been cleared in this way at Macedon for the Macedon Pineacres Ltd., and pine trees are now planted in the ground cleared at a cost of one-third of what it would have cost to clear the same land by grubbing the trees out.

valves are all features that will impress the orchardist.

Much ingenious thought, time and money have been devoted to perfecting the "New Record" machinery, and a high degree of efficiency has been reached. The manufacturers are so convinced of the durability and strength of their products that they give from 1 to 5 years' guarantee to supply worn or broken parts free of charge.

All our machinery will be demonstrated at the forthcoming Royal Show, corner Patterson and McGregor Streets.



## Western Australia.

New Growers' Organisation : Export Control : News and Notes.

### ORGANISING THE FRUIT INDUSTRY.

#### Representative State Board to be Formed.

AT THE INSTANCE of the Western Australian Fruitgrowers' Association, orchardists of the State met in Perth on August 11th, when it was unanimously decided to form a Western Australian Fruit Industry Organisation Board, consisting of 15 members representing the various sections of the industry.

Mr. James Martin, of Mt. Barker (President of the Fruitgrowers' Association) who was in the chair, said that the Fruit Markets Bill was rejected as unsatisfactory last year by the Bridgetown Conference. This was a new attempt at organisation. It was no use to rush in and get legislative powers to do certain things before the growers were educated up to certain points. The Association wanted power to organise so that they could educate the growers and speak to the Government with a strong and united voice, and tell it what powers they wanted.

The organisation scheme drawn up by the Association was accepted in the following form, the general principle being agreed to unanimously:—That a Western Australian Fruit Industry Organisation Board be formed, the central board to be constituted of 15 sectional representatives as follows:—Apples and Pears, 5; Citrus, 3; Stone fruit, 3; Grapes and dried fruit, 4 representatives, from the districts concerned.

The members of the Board shall be

elected by the growers, the first provisional board being elected by general meetings in the different districts. The Board shall draw up a constitution to regulate its operations.

The finances shall be provided by a levy on every case of fruit marketed or exported, not to exceed one penny per bushel, the local board to be financed by the Board out of the funds raised.

The objects of the scheme shall be:—(1) To organise the fruitgrowing industry throughout the State, and place it on a stable basis. (2) To act as the medium between the growers and the State and Federal Governments in matters appertaining to the industry. (3) The Board shall be non-commercial and non-political. (4) To confer with shipping agents and others with regard to the transport of fruit overseas, and the opening up of new markets. (5) Any matters in which general benefits to the industry can only be secured by co-operation. (6) To assist in the scientific solution of the various problems of the industry. (7) To improve local marketing conditions. (8) To educate growers in the proper method of preparing fruit for market and export. (9) When funds permit to carry out a properly-co-ordinated system of advertising of Western Australian fruit in the State and overseas. (10) To appoint members to the Australian Fruit Council, or any body that from time to time may be functioning. (11) To advise in the case of any emergency or crisis that may arise affecting the industry. (12) To take any other action that it may deem fit for the good of the industry.

It was resolved unanimously:—(1) That this meeting is in favor of central markets controlled by a trust on which the producers have adequate representation; (2) that it be a recommendation to the proposed organisation board that immediate consideration be given to the establishment and control of the marketing of fruit.

Later a deputation representative of all sections of the industry waited on the Minister for Agriculture (Mr. M. F. Troy) to place before him the resolutions of the Conference.

The Minister, in promising to bring the request before Cabinet, suggested that the deputation endeavor to draw up a concise measure that would give the fruitgrowers power to organise.

### WESTERN AUSTRALIA.

#### Operations for September.

**P**LOUGHING should be completed early in this month, and the cultivators and hoes brought into use. Our winter rainfall is abundant, our summer rains meagre, and thorough cultivation is essential to retain sufficient moisture in the soil to enable the trees to mature a crop of fruit.

Pear trees should be sprayed this month in the "pinking stage" with Bordeaux Mixture to control **Black Spot**, using 6 lbs. bluestone, 4 lbs. lime in 50 gallons of water, or Burgundy mixture, using 6 lbs. bluestone, 8 lbs. washing soda, in 50 gallons of water.

Where Apple trees are affected with **Powdery Mildew**, they should be sprayed with atomic sulphur at a strength of 1 lb. of atomic sulphur in 8 gallons of water as soon as the young fruit has formed.

Where citrus trees are infested with **aphis**, continue spraying with tobacco extract and soap.

Continue trapping fruit flies, and also use foliage bait on all trees where the fruit is in a stage of ripeness, which will allow the female fly to deposit her eggs therein.

Loquats and Oranges require very careful attention, so as to prevent them from carrying the pest forward to the summer fruits.

The planting of citrus trees should be completed this month.

Graft over all old obsolete varieties of Apple and Pear trees. Use the strap graft, and, if not familiar with it, ask the district orchard inspector for a demonstration.—Geo. W. Wickens, Officer-in-Charge Fruit Industry.

### FRUIT EXPORT CONTROL.

#### Opposed by Western Australia.

**S**TRONG PROTESTS have been registered by the Western Australian Fruitgrowers' Association and the Fruitshippers' Committee against the introduction of legislation to control the export fresh fruit trade, until growers have had full opportunities of considering the proposal in detail.

At the present time the body representative of fruitgrowers throughout the State is the W.A. Fruitgrowers' Association, which works in very close touch with the Fruitshippers' Committee, neither acting until they have interchanged views. The Fruitshippers' Committee is a very live

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Established 1822.

A century's experience in handling  
**FRUIT OF ALL DESCRIPTIONS**

All Consignments for U.K. will have  
Personal Supervision and Attention  
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Schloesing's Mixture has been in use in Europe for about 30 years, and has the advantage of doing away with the large amount of labour necessary in preparing the ordinary Bordeaux Mixture. It does away with the necessity for—

1. A stock mixture of Bluestone.
2. A supply of lime milk.
3. Mixing the two in proper proportions.
4. Testing with paper for acidity, etc., as it is slightly alkaline.
5. Straining, as there is no grit in the material.

Do not add anything for "Sticking" purposes, THE MIXTURE WILL "STICK" ITSELF.

SCHLOESING'S READY MIXED

## BORDEAUX SPRAY MIXTURE

(Guaranteed to Contain from 50 to 56 per cent. Copper Sulphate)

An Absolute Preventive for Downy Mildew of the Vine, Curly Leaf and Brown Rot of the Peach, Shot Hole of the Apricot, and Cure for Black Spot of the Vine, Apple and Pear, Blue Mould on Oranges, Sleepy Sickness of Tomato (Tomato Wilt), Mildew on Roses, Black Spot on Carnations (if sprayed as spots crack), and other Fungus Diseases.

Schloesing's Mixture has achieved remarkable success in N.Z. and Tasmania, where large quantities of it are used.

Many testimonials have been given as to its efficacy, and above all, it is the ease with which it is used which recommends it to growers.

Cygnets, Tas., 10th April, 1926.

I have used your Spray Powder for Black Spot, and can highly recommend it as it has given me every satisfaction.

I have given your traveller an order for 2 c/s for next season.

Yours truly, (Sgd.) I. D. WYLIE.

Cradoe, Tas., 27th March, 1926.

Please order for me 2 c/s of the Schloesing's Bordeaux for Black Spot.

I used it last season, and found it to be quite as efficacious as the old Bordeaux Mixture, and much more easily mixed.

Yours truly, (Sgd.) JOHN BRYCE.

Sole Agent for Victoria:

LAWFORDS FRUIT EXCHANGE

Pty. Ltd.

::

DONCASTER

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body, and greatly trusted and respected by the growers, who have, on numerous occasions in recent years, passed resolutions entrusting decisions of an urgent nature to this Committee.

The State is said to be firmly against the proposed Act, under which everything was being left to regulation, and the smaller-producing States would be outvoted by Tasmania. The feeling for secession is very strong in Western Australia, and the community in general is against the Federal Government obtaining any more control than is absolutely necessary over the primary and secondary industries of the State.

### W.A. BEEKEEPERS' CONFERENCE

THE THIRD ANNUAL CONFERENCE of the Westralian Beekeepers' Association was held in Perth early in July, being opened by the Governor (Sir Wm. Campion). Visitors included Mr. W. S. Pender, Editor of "Australasian Bee-keeping," and President N.S.W. Beekeepers' Association, and Mr. G. G. Phillips, Secretary of that body.

Mr. Pender, in outlining the development of marketing organisation in N.S.W., indicated the disadvantages of disorganisation elsewhere; honey being dumped on their market by

speculators, particularly from South Australia. Mr. Phillips said that the N.S.W. beekeepers had associated themselves with the Producers' Distributing Society, which now controlled 60 per cent. of the honey produced. Prices were never under 5d. The pool system of marketing was favoured.

Regarding export, it was unanimously decided to ask the Commonwealth Government to prohibit the use of second-hand containers, and to endorse eastern States' requests that honey be graded by the State Apiarist at the port of export, there being two colours—light and medium amber.

It was decided to ask for the early appointment of a State Government Apiculturist. Railway freights were discussed, the Department being requested to apply the single package rates, or a flat rate as for fruit. It was decided that honey for competitive purposes be shown in 1 lb. round bottles, instead of tins.

Interesting addresses were delivered by Mr. C. A. Gardner, Assistant Government Botanist, on "Trees, Pollen and Honey," and Mr. D. McVicar, Head Forester, on the "Protection of Forests." Two members of the Beekeepers' Association had been appointed honorary inspectors by the Forests' Department, and the extension of the scheme was favoured.

Office-bearers for the ensuing year were elected as follows:—President, Mr. H. L. Cailes; Vice-Presidents, Messrs. R. S. Sampson, M.L.A., C. Cook, C. G. Walshaw, L. Blair, and E. Wilson; Committee—Messrs. C. H. Stone, L. J. Skipper, A. Cook, H. W. Lance and E. T. Kempin; Hon. Secretary, Mr. C. H. Stone; Treasurer, Mr. E. Austin; Auditors, Messrs. Lance and Walshaw.

### W.A. TOMATOES FOR MELBOURNE.

The Minister for Agriculture in W.A. (Mr. M. F. Troy) stated recently that the first shipment of Western Australian Tomatoes to Melbourne this season, which arrived at the end of July, consisted of 87 cases, for which good prices were obtained. Growers are gratified at this evidence that Western Australian Tomatoes can be marketed at an earlier date than those grown in other States.

### CHANGE OF ADDRESS.

Messrs. A. Victor Leggo and Co., notify that in future their Melbourne address will be 218-222 Queen Street, instead of 497 Collins Street, as heretofore.



## South Australia

### News and Notes

#### RIVER MURRAY PRUNING COMPETITIONS.

**P**RUNING COMPETITIONS are held annually along the River Murray, under the auspices of the Agricultural Bureau of South Australia. The competitions were inaugurated in 1921, and are in two sections, vines and trees, divided respectively into the following classes:—Vines: Doradillo, Currant and Sultana; trees: Apricot, Peach and Pear.

The first of the 1926 series took place at Mypolonga on July 1, on the property of Mr. W. A. Eustace, in the presence of about 100 Bureau members and visitors. Included in the gathering, says the S.A. "Journal of Agriculture," were Messrs. F. Staniford and C. R. Collins, M's.P., E. Leishman (District Orchard Instructor), and F. C. Richards (Assistant Secretary of the Central Agricul-

#### Tree Section.

In the Apricot division, Mr. B. Edson was again successful, with 79 points out of 90. In the Peach division Mr. A. Burrett secured 101 points out of a possible 120. In Pears Mr. A. Kuchel secured 76 out of a possible 90. Certificates were awarded to a number of competitors.

#### Trophies.

Mr. A. Burrett, with 501 points, won the "Cresco" trophy for the best all-round pruner, and also the trophy donated by Messrs. Colton, Palmer and Preston Ltd., for the competitor gaining the highest number of points in the vine section. Mr. J. Hocking won the South Australian Gas Company's trophy for the highest number of points in the tree section, and also second prize in the vine section. The second prize in the tree section, presented by Messrs. Griffiths Bros., was divided by Messrs. A. Burrett, B. Edson and H. Hill. Seven medals were awarded by the Committee to the winner of each class of the competitions.

#### Judge's Comments.

In commenting on the work of the competitors, Mr. Leishman said the pruning showed an improvement over that of last year. In dealing with the vines, competitors were inclined to leave too many buds on the spurs, and in many instances the spurs were too crowded. Dirty and jagged cutting was also in evidence.

In the tree section, competitors were at fault in dealing with the fruiting wood, and in the treatment of the leaders, but, generally speaking, the work was of a higher standard than that shown the previous year.

#### THE PRUNE GROWING PROBLEM.

Mr. O. Weste, Renmark, writes:—

I would appeal to the Prune growers, through the "Fruit World," to become an organised body before next harvest, otherwise they will be confronted with probably a glutted market and a slump in prices. I believe there is a Prune Growers' Association of a kind in the Murrumbidgee area, if so, it should be linked up with S.A. and Victorian growers.

Here, in South Australia, there is no such association, and growers are tumbling over each other to sell stocks. In Renmark there are very

few Prunes grown, but in areas such as Clare and McLaren Vale, the position is becoming acute, and although growers realise this, it seems nobody's business to do the spade work.

I would be particularly pleased if you could give me the following information:—(1) What is the planting of Prunes in the Commonwealth in the last 10 years, and the varieties? (2) The present Commonwealth consumption of Prunes? (3) The quantity of Prunes imported from abroad? (4) What is the duty on Prunes?

Mr. E. E. Herrod, Secretary of the N.S.W. Prune Growers' Association, states:—(1) Exact plantings are unknown, as the figure is extremely difficult to ascertain accurately; but we say in round figures the present area under Prunes totals approximately 4,000 acres.

(2) The present Commonwealth consumption approximates 700 tons.

In regard to the latter questions, the Department of Markets and Migration advise that the quantity of Prunes imported into Australia during the past three years was 348

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and Exporter*

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49 WILLIAM ST.,  
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ORANGES, BANANAS, PINES and  
all other fruits.

Account sales with cheque daily.

tural Bureau), Mr. E. Leishman adjudicated, with Mr. W. Noles, of Mypolonga, as consulting judge. There were 11 entries in the vine section, and 19 in the tree section.

#### Vine Section.

In both the Currant and Doradillo divisions, Mr. A. Burrett secured the highest number of points, 77 and 76 respectively out of a maximum of 90. In the Sultana division, Mr. B. Edson secured 101 points out of a maximum of 120. Good points were secured by numerous other competitors. Messrs. A. Burrett, J. Hocking and B. Edson, with 252, 248 and 247 points respectively, are eligible for the Championship Competitions.

## H. M. WADE & CO.

### Fruit Merchants

Prompt Advices of Sales  
— CHEQUES WEEKLY —

471 FLINDERS LANE  
MELBOURNE  
And WESTERN MARKET.

tons in 1922-23, 303 tons in 1923-24, 154 tons in 1924-25. The duty on Prunes is 4½d. per lb. from all countries.

Mr. Herrod adds:—"The whole position is one calling for very serious thought, and in view of the fact that there are over 3,000 acres planted to Prunes in this State alone, it is causing considerable anxiety to us. We say in round figures that one acre produces one ton of dry Prunes, and it means, therefore, that we are faced in the near future with a potential production of about 4,000 tons to meet the requirements of a market at present absorbing only about 700 tons."

# Soil Cultivation is Essential for Successful Fruit Culture

Modern Implements are Efficient, Labor Saving,  
Durable and Economical

**Daniel Harvey's Patents Have Benefited Growers**

**T**O every thoughtful fruitgrower the fact is obvious that the Australian fruit industry has of late years developed at a surprising pace. Evidence of this is seen in the urgent attention which is being paid to marketing problems; local, interstate and overseas.

There is one aspect of the industry which demands the closest consideration, for on it above and beyond all

of considerable magnitude, primarily due to the effective service rendered to growers.

Implements are manufactured for deciduous tree orchards, citrus groves, vineyards, berry gardens, nurseries and canefields—for horse or tractor power.

Initial success came with the plough having "shifting" handles, enabling the ploughman and the horse to walk clear of the branches, the plough turning the soil close to the butts of the trees. This principle has been adopted with spring tooth cultivators.

Other valued implements include disc ploughs, one-way disc cultivators, grape and berry hoe, etc. For each of the many implements manufactured, Mr. Harvey is in receipt of valued letters of appreciation—unsought, spontaneous gratitude for implements which stand every test, possessing their own distinctiveness in quality and design.

It would be impossible in this short space to describe at length any of the lines made at Harvey's works. Full particulars, however, are included in illustrated booklets, which are available on request.

others, depends final success. That is the matter of **efficient production**.

If our costs of production are too high, we are in the grip of economic realities, and must exercise all our ingenuity to bring our costs of production as low as is consistent with efficiency.

It is just here where the enterprise of Daniel Harvey, Orchard Implement Maker, of Box Hill, Victoria, comes in.

Harvey's orchard implements do their work efficiently—they are strong and durable—labor saving; they keep the ground in good mechanical condition, thus assisting to maintain the healthy productivity of the trees.

The necessity for unremitting attention being paid to the correct method of cultivation has been so often stressed that there is no need for repetition here.

Suffice it to say that of all fruit producing operations there are none more important than those relating to the care of soil conditions.

From a small beginning, Mr. Harvey's works developed into a business

it is frequently found that, according to circumstances, a tractor is desirable.

For working behind a tractor, Harvey implements are easily operated by means of a single trip rope, which controls the power lift for lifting the plough in and out of the ground at the headlands. The levers for the variation of the depth are also within easy reach of the driver, and he does not need to shift from his seat.

It is to the credit of Mr. Harvey that he is consulted on these matters. Certainly, it demonstrates the close attention to the details of soil cul-



"Harvey" 2-Furrow Shifting Orchard Plow.

tivation which are such a huge factor in the success of the industry, and the individuals concerned.

Apart from the well-known features of the Harvey implements, i.e., their strength, lightness and capacity to work up close to the butts of the trees, there is an implement which has particular merit. This has been



"Harvey" 7-Furrow Power Lift Tractor Disc Plow. (Model H.D.4).

termed the grape hoe, and while it is of extraordinary value in the cultivation of Grapes and berries, it is also unequalled to ordinary orchards, vineyards and citrus groves. It will cultivate close up to the vine or tree without injuring either, and by reversing the blade the earth can be thrown up against the vine or trees as desired. It is reckoned to do the work of at least ten men, and to earn its cost many times over in a single season. A skimmer blade attachment and a fine-tine cultivating attachment can be fitted to the Grape hoe.

**At the Melbourne Show.**

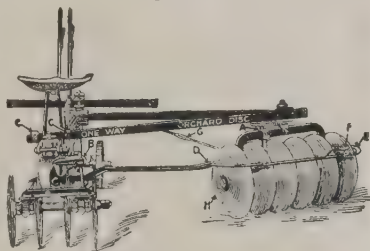
As usual, Mr. Harvey will have a stand at the Melbourne Agricultural Show from September 16th to 25th. The address is No. 29 Main Avenue, and all enquirers will be welcomed.



"Harvey" 4-Furrow Stump-Jump Short-board Tractor Plow. (Model S.J.21).



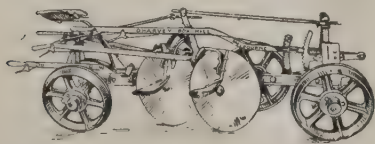
"Harvey" Double-furrow Vineyard and Orchard Plow.



"Harvey" One-Way Orchard Disc Cultivator.

It was said, in opening, that the fruit industry had developed considerably. If additional evidence were needed, it would be in the fact that tractors are being used in ever increasing numbers.

Here, again, the utility of Harvey's implements is noted—for growers are ever seeking Mr. Harvey's advice, not only as regards tractors, but the implements which are to be used with them. In some instances it is apparent that a tractor would not be economical, whilst on the other hand



"Harvey" Heavy Furrow Orchard Disc Plow.



# THE AUSTRALIAN CITRUS GROWER



## CALIFORNIA CITRUS INDUSTRY.

Report by Mr. C. H. Katekar.

**A**T A MEETING of growers held at Renmark on August 9, Mr. C. H. Katekar presented a report of his recent trip to California, undertaken in the interests of the Citrus Growers' Association. Mr. Katekar spent most of his time in the Citrus-growing counties of Southern California, where there are 198,728 acres under Citrus trees.

Mr. Katekar stated that the Citrus industry has reached a high state of development in California. In the 1923-24 season—the year of greatest Citrus production—California supplied 22,000,000 of the 43,000,000 cases of Oranges and Grapefruit, and 89 per cent. of the 5,000,000 cases of Lemons consumed. The f.o.b. value of the Californian crop was estimated at 70,000,000 dollars. Next season the production was less, but owing to high prices the value was over 93,000,000 dollars.

The Californian Citrus industry owes its importance primarily to two factors—the high pitch to which the

growers have brought their methods of soil cultivation and crop production, and the co-operative control of the crop exercised by the Fruitgrowers' Exchange. In the last analysis, these two factors are one. Without the Exchange organisation, and the work it has done in educating the fruitgrower in methods of production as well as in disposing of his crop, the production of Citrus fruits in California could have attained only a fraction of its present dimensions.

Thirty years ago there was serious talk of over-production of Oranges in California. Marketing facilities were bad, and the outlook gloomy. The industry was saved by the development of the co-operative system of organised marketing, and the outlook has never been brighter than it is to-day. Orange groves at Riverside are finding ready sales at up to £800 per acre.

### Australia's Advantages.

So far as natural conditions for the production of Oranges are concerned, Australia is in no way behind California. The soil is as good as theirs, and climatic conditions better. Californian growers are liable to severe loss from frosts, against which they have to be regularly protected by a vast provision of heating pots, and they have more scale and insect pests to contend with. Nor is the quality of their Oranges quite equal to ours. But in their cultural, harvesting, and marketing methods the Californians can teach Australians a great deal.

### Cultural Methods.

Groves inspected at Riverside and in Santa Ana, La Verna and Anaheim counties, gave the impression that they were wonderfully well cultivated, fumigated, pruned and generally cared for. Growers concentrate their attention on working their land and looking after the trees. The crops are commonly harvested and packed by the local associations.

Pruning methods are similar to those adopted in Australia, plenty of light being let into the trees, and selected inner growth preserved for fruiting wood. The Late Valencia crop was in full swing, and the fruit seen on the average was much better than usually seen in Australia, except in selected orchards.

### Manuring.

Sulphate of ammonia, sulphate of potash, bonedust or blood and bone are used in greater or lesser measure according to the amount of animal manure available; as much as a ton to the acre is applied in three or four dressings throughout the year where the supply of animal manure is short. The Californians are great believers in animal manure. They also grow cover crops largely for ploughing under, and use old lucerne hay, straw, etc., to increase the humus.

### Cultivation.

At the end of winter the cover crop is turned in by heavy disc ploughs drawn by tractors. After each irrigation—at intervals of never more than 30 days during the spring and summer—the land is thoroughly worked with a heavy disc cultivator,

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### Fruit Merchants

Established 1882

A Trial Consignment solicited from Growers in all States.

Prompt Settlement.

**11 WESTERN MARKET,**  
**Melbourne**

Many orchardists have a heater to each tree, with perhaps an extra row on the windward side. It is said to be possible by this means to raise the temperature in the vicinity of the trees from 7 to 10 degrees. Thermometers are placed at strategic points, and warnings are given by



telephone, or by motor-cyclists, who regularly patrol the orchard districts. There are also heaters which automatically light themselves when the danger-point of cold is reached.

#### UP-TO-DATE CITRUS MARKET-ING.

We learn that Citrus-growers in the Nepean, Hawkesbury, and Gosford districts of New South Wales are this year adopting American methods in marketing their Oranges. The fruit, most of which is being sent to New Zealand, is cleaned, brushed by machinery, and wrapped in paper bearing advertising matter.

The crop, though light, is of excellent quality, and the packing sheds expect a good year. The American cleaning and brushing machines installed at Gosford are the first to be used in Australia.

#### THE CAPER BUTTERFLY AND ORANGE TREES.

Referring to the discussion on Caper Butterflies and Citrus Trees in our July issue, Mr. C. F. Cole, Orchard Supervisor, Wangaratta, has forwarded notes on a visitation of myriads of these butterflies (*Anaphalis Tentonia*) to the district in November and December of 1920.

Apparently influenced by the need for seeking plant food, immense numbers of these insects in migratory flight reached Wangaratta, sheltering in the young Orange groves. Eggs were deposited on the young shoots of the sweet Orange trees, no other species of the

citrus family being used. None of the larvae, however, lived longer than ten days after hatching. Mr. Cole adds:—The tender shoots of the young sweet Orange trees must resemble, in some way, the indigenous species of plant "Capparis," used by this butterfly as a plant for the maturing of its larvae. Perhaps the fact that the species *Papilio anactus* (common in this district) was using the sweet Orange tree freely as a plant food, may have influenced the Caper species to deposit its eggs thereon.

#### LADYBIRD ENEMIES OF THE MEALYBUG.

Mr. John D. Howe, Citrus grower of Upland, U.S.A., has discovered that two Norfolk Island Pine Trees (*Araucara excelsa*), planted in front of his home are groaning under the weight of millions of ladybird beetles, *cryptolaemus*, natural insect enemy of the citrophilus mealybug, according to the "Upland News." When Mr. Howe first discovered the bugs he thought they might be mealybugs, to which they bear a resemblance, and called in Charles Anderson, horticultural inspector in charge of the insectary at Upland. Mr. Anderson declared that the two trees were laden with the particular bug he had been propagating at the insectary. It has been a source of wonder to horticultural men why Mr. Howe's Citrus grove has been free from mealybug when surrounding orchards have them, but the recent discovery solves the riddle.

#### LEMON PRODUCTION.

The production of Lemons in Australia is given by the V.C.C.A., as follows:—

New South Wales produced last statistical year 276,485 cases. Victoria, 95,443 cases. South Australia, 46,647 cases. Queensland, 20,733 cases. Western Australia, 58,421 cases. Total, 497,729.

Crops everywhere this year are said to be light, and growers are complaining about the low prices offered by factories.

#### OUR LOST OPPORTUNITIES.

After his experience recently, stated the "Sunraysia Daily," a visitor to Mildura, who hails from Toronto, Canada, thinks that Mildura should get all possible advertisement from its fruit when visitors come to the district. The visitor who was staying at one of the Mildura hotels, requested Oranges for breakfast. To his astonishment, he was told that there were no Oranges available at the hotel, and the waiter substituted mandarins. The visitor, a prominent business man, stated that "Sunkist" Oranges from California, nicely wrapped in tissue paper, could be obtained at every hotel in America or Canada, and in this way Californian fruit got a fine advertisement.

#### MANURING A CITRUS ORCHARD.

Mr. C. H. Katekar, in his report on the California Citrus industry, quoted the following fertiliser programme designed by Professor Hodgson, of the University of California, as the result of some 18 years of experimental work:—

"(1) In the young orchard grow cover crops (winter always, late summer if possible) but keep them under control. This treatment alone is usually sufficient for the first seven or eight years.

"(2) For young bearing trees grow a winter cover crop and apply bulky organic materials to supply a total of two pounds of nitrogen per tree per year. This treatment should suffice until the trees are 12 to 15 years old.

"(3) From this time on apply two to three pounds of nitrogen per tree (more sometimes), approximately half of which should be from bulky organic sources and the remainder from concentrates.

"(4) Use lime and other soil amendments only where tests show definite measurable improvement in tree health or yield."

## The New South Wales Fruit and Vegetable Agents' and Merchants' Association

The above Association, representing practically the whole of the wholesale selling interests of the Fruit and Vegetable Trade of Sydney, exists to protect the interests of both Growers and Agents, and will welcome communications on all matters affecting the trade which may arise for investigation, adjustment, discussion or determination.

Address all communications to

**HENRY W. F. ROGERS**

Secretary,

Fruit Exchange,

**SYDNEY**

## Victoria.

### Crop Reports : Cool Stores Conference : Grape Shipments

#### FRUIT CROP REPORT.

The report of the Superintendent of Horticulture for July is as follows:—

##### Deciduous Fruit.

At the present time, the co-operative and other cool stores are well stocked with Apples and Pears, supplies for local markets constituting most that is being taken out at the present time.

Deciduous fruit trees give every indication of good crops for the coming season, the fruit buds having matured under excellent conditions.

Growers are now busily engaged in pruning and spraying, but in some districts this work has been hindered considerably by frequent rains.

Green cover crops are well advanced for this time of the year.

##### Viticulture.

July is usually a quiet month in vineyards well ahead with winter work. Pruning is now well advanced, ploughing much less so. This is no doubt due to oft repeated showers keeping the surface soil moister than usual. Ploughing should be pushed forward, so that it may be completed before root action starts. Cutting the vine roots may be done with impunity during the dormant period, but it is certainly injurious to the active root.

The time for swabbing—the preventive winter treatment to control Anthracnose, is approaching—it should not be neglected on Sultanas and other susceptible varieties. After the wet winter we are experiencing the Spring may prove quite suitable for

a severe visitation of this fungus. Growers are apt to forget that swabbing delays the first appearance of Black Spot, and renders subsequent control correspondingly easier.

Owing to the more hopeful outlook in the wine and dried fruit trades, rather more vines are being planted this winter than during the past one. A definite pronouncement that the export bonus on sweet wines is to be extended after September, 1927, would lead to much increased planting. Such is eagerly awaited in wine and Dorrillo circles.

##### Citrus.

The Executive officers of the Victorian Central Citrus Association, the Superintendent of Horticulture, and the Citriculturist of the Department, have just completed a tour of the Murray districts, and the crop of citrus fruits now being harvested compares very favourably, both for quality and quantity, with that of previous seasons.

The Melbourne market is being well supplied with good quality fruit, and prices equal to those of last season have been sustained. Copious rains are still being experienced right throughout the Citrus areas, and the promise for next season is a good one.

#### VICTORIAN GRAPES FOR NEW ZEALAND.

The Ohanez variety carried in perfect condition and realised 21/- to 30/- per case.

The Minister of Agriculture in Victoria (Col. M. W. J. Bouchier), states that the Department of Agriculture is in receipt of a communica-

tion from the Australian Representative (Mr. W. Smallhorn) at the New Zealand and South Seas Exhibition, held in Dunedin, in which Mr. Smallhorn points out that three shipments of Grapes were received from the Victorian Department of Agriculture during the currency of the Exhibition. The first shipment consisted of ten cases of **Gordo Blanco**. These Grapes, although packed in cork, arrived in a very unsatisfactory condition, and it was not possible to obtain more than a dozen small bunches of Grapes from each case, as the fruit would not hold to the stalk.

The second shipment consisted of eight cases of **Walthams**. These were also packed in cork and were much more satisfactory than the first shipment, although a considerable number of berries fell off the stalks. Mr. Smallhorn used six of these cases for display purposes and sent four to the fruit auctioneer for disposal. They averaged 14/- per case.

The final shipment consisted of 20 cases of **Ohanez**, 16 being packed in cork, and four not packed. The Grapes packed arrived in perfect condition and were sold in the Australian Court for 21/- per case. Mr. Smallhorn examined a shipment of the same variety of Grapes from the Wellington Market, from 25/- to 30/- per case. All New Zealand Grapes are grown at great cost under hot-houses, and sell in the retail shop from 2/6 to 4/6 a pound. Australian Grapes of the Ohanez type were being sold at from 1/6 to 2/- per pound. "There is no doubt," says the Australian representative, "that there is a good market in New Zealand for this 'latter type of Grape.'"

Col. Bouchier said he was gratified to receive such a report, and it confirms progress reports previously received.

The Minister added that the first and second lots (Gordos and Walthams) were experimental. These

## ANOTHER PEST ELIMINATED

No present day Orchardist expects to keep his fruit trees alive and in full bearing unless he can keep down, by spraying with poisonous liquids, the thousand and one insect pests, fungoid growths, and other similar evils to which his trees are always subject.

Just as your trees are attacked, so is all your steel and ironwork, which forms the largest part of tools and implements you buy.

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sorts have long been known not to carry so well as Ohanez. None of the latter were ripe at the time, and it was hoped that, for a short voyage, Gordos and Walthams might be landed in good order, in which case they would surely be much appreciated.

The excellent condition the Ohanez arrived in, is in accordance with previous experience. It is to be hoped that this successful shipment may lead to our Ohanez growers catering for the New Zealand markets.

#### EXPORT OF OHANEZ GRAPES.

#### Gratifying Success of Experimental Shipments.

With regard to the experimental shipment of Ohanez Grapes per the

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MELBOURNE

Reference—Satisfied Growers in all States

s.s. "Moreton Bay" on the 14th April last, the Minister of Agriculture and Markets (Col. M. W. J. Bouchier) states that he has received a report from the Agent-General, which indicates that this has been a gratifying success so far as the condition in which the Grapes were landed, is concerned. Prices suffered from the after effects of the strike—as it is, they were profitable, but would have been more so under normal conditions.

Comparison of the cases in treated and untreated cork shows the superiority of the former. Though not so conspicuous, as it would no doubt have been in a less favourable season—all the fruit having arrived in very good order—it is nevertheless shown by the prices.

The Grapes in treated cork averaged 16/3½ and 15/4½, as against 14/10 and 14/9½ for those in untreated cork.

Though the general condition was not vastly different, the Grapes in untreated cork showed mould-nests

and botrytis, and transit rot, two of the worst fungi affecting Grapes in storage. In the treated cork these were absent. This points to the fact that in an ordinary season the superiority of the treated cork would have been more in evidence.

Development of mould on the stems is shown by investigation not to come from the cork. The experiment suggests that it can be controlled by heating and drying the cork filler and packing as dry as possible.

The treatment of the cork on the lines first tried in this experiment seems fully justified by results. These investigations point to the solution of the fresh Grape shipping problem. They need, of course, to be further followed up; so far as they have gone, they are distinctly encouraging.

#### COOL STORE CONFERENCE.

THE EIGHTH ANNUAL COOL STORES' CONFERENCE, to be opened by the Minister for Agriculture, will be held at Doncaster on August 31 and September 1. The first day and evening will be devoted to business, and the second to places of interest in the district and the Doncaster West Cool Stores.

The agenda includes items re self-registering thermometers on ships carrying fruit; lodging of quarterly returns under Industrial and Provident Societies Act; monthly returns of fruit held in stores; affiliation with Metropolitan Section, and Apple and Pear Growers' Section of the Victorian Fruit Council; the working and management of stores; consequential loss insurance; fruit export and control board; election of officers; question box. Papers will be read by Messrs. G. A. Cook, M.Sc., Council of Scientific and Industrial Research; G. B. Tindale, B.Agr.Sc., Department of Agriculture; R. Sutherland, Chief Engineer, Orchardists' Cool Store; B. G. Nicholl, and an address on "Electrification of Cool Stores, by Mr. McArthur, State Electricity Commission.

The annual report states that during the past year three additional stores have joined up—Pakenham, Graceburn Valley Orchard, and Elinora Orchard. The questions of self-recording thermometers in ships, and monthly statistics of fruit held in store are still under consideration. Competition for the Association's Shield at the last Royal Show was keen, and the display creditable. The result of the shipment of fruit to China is being awaited with interest. The Association again commends

the action of the Department of Agriculture in establishing fruit-packing classes in various districts. The balance sheet at June 30, shows assets of £50 fixed deposit and cash balance, £19/16/7.

The capacity of the Affiliated Stores is 726,000 cases.

#### BERRY-GROWERS' CONFERENCE.

#### Prices for Coming Season Fixed.

At the Conference of Berry-growers, held at Wandin during August, consideration was given to the advisability of affiliating with the different associations with a view to fixing prices for the coming season.

It was, however, decided that the best interests of the industry would be served by each body preserving its identity and working in conjunction with each other.

The prices fixed for the coming sea-

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son were for buckets of 12 lbs. fruit:—Strawberries, 7/6; Raspberries, 8/-; Loganberries, 5/-; Blackberries, 4/6; Gooseberries, 4/6; Cape Goosberries (perennial), 9/-; Cape Goosberries (annual), 4/-; railway freight to be added. The increase in the price of Raspberries is on account of an increase in the cost of production.

#### THE PASSING OF THE CENTRAL FRUITGROWERS' ASSOCIATION.

#### Mr. J. B. Brewer Appreciated.

At the recent Portland Fruitgrowers' Convention, a resolution was carried expressing appreciation of the valued services of Mr. Jas. B. Brewer to the fruitgrowing industry. This resolution was conveyed to Mr. Brewer, who writes, inter alia:—"It is with deep regret that I note the passing of the old Central Association, but I realise that the industry, like a child growing into maturity, must put off the clothes of its childhood, and I

Continued on Page 432



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J. A. REDPATH & SONS  
Ltd.  
37 Johnston Street, Wellington



am glad to see that the men who really were the spirit of the Central will still be at the helm to guide the vessel just launching. I wish the new Institution every success, and will follow its deliberations, and if at any time I can lend it any aid, I shall feel it a privilege to do so."

#### PROPOSED EXPORT CONTROL.

Victoria is divided on the question of the proposed Apple Export Control Bill. Growers desire to conserve their f.o.b. trade, but buyers state that they cannot operate under the Bill as drafted. Meetings at Doncaster, Pakenham, and Quantong were unfavorable to the control proposals. The Executive of the Apple and Pear Growers' Association favors the Bill. A special conference of all interested has been called for Wednesday, September 22nd, at 2 p.m. at 325 Collins-street, Melbourne.

#### GOVERNMENT COOL STORES.

With a view to placing the cool stores on a more satisfactory commercial basis, the Victorian Government has decided to appoint a board of three business men to take over the management. The stores have shown an annual loss since 1920-21.

#### VALUE OF THE FRUIT INDUSTRY.

Dr. S. S. Cameron, Director of Agriculture, stated recently that the fruit industry represented an annual wealth of five million pounds, poultry 4½ millions, dairying 20 millions. Yet of the 13 young men trained at the University (who are now in the Department), no less than five had gone into the Science Branch and the Fruit Division. These were Mr. D. B. Adam, B.Agr.Sc., Plant Pathologist; G. T. Levick, B.Agr.Sc., Assistant Entomologist; G. B. Tindale, B.Agr.Sc., Cool Storage Problems; S. Fish, B.Agr.Sc., Plant Pathology; and F. M. Read, B.Agr.Sc., specially engaged in irrigation and Citrus problems; Mr. D. B. Adam is now abroad with a view to gaining further knowledge on plant pathological technique.

#### OPENING HOUR OF VICTORIA MARKET.

A meeting of the Retail Fruiterers has been called for September 30, when a vote will be taken regarding the opening hours of the Victoria Market. Opinion is divided as to whether selling should commence at 4 a.m. or 6 a.m.

#### FRUIT MARKETING ORGANISATION.

##### Repayment of Advance.

The Minister for Agriculture has advised the Chairman of the State Fruit Advisory Board that further financial advances to the Fruit Marketing Organisation will not be recommended. The sum of £2,000 advanced "to promote the more profitable marketing of fruit" is to be repaid, and legislation enforcing compulsory contributions by fruitgrowers will be introduced dealing with each section of the industry separately. The first of the necessary Bills will relate to the Citrus industry.

#### SHEPPARTON FARM SCHOOL.

The Shepparton High School Farm last year showed a profit of approximately £200. The receipts were £830, including £680 from farm produce and fruit; and £135 from stock. Expenditure, including depreciation, came to £630.

The farm includes an orchard of 14 acres, irrigated when necessary. The Peach trees number 320 Pullar's Clings, 120 Goodman's Choice, 100 High's Early Canada, and 100 Elbertas. There are 300 Moorpark and 120 Oullin's Apricot trees, 60 Apple trees of nine varieties, 40 Plum trees, 200 Pear trees (mostly Williams), 24 Cherry trees, and a few Fig and Almond trees. At present there are very few Citrus trees. The addition of 11 acres of Valencia and Navel Orange trees is proposed. Vines occupy 1½ acres.

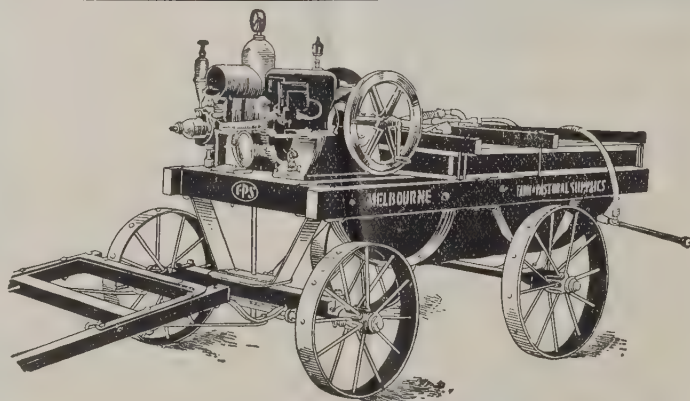
The Department of Agriculture has undertaken experimental work in the orchard in relation to combating fungoid diseases.

#### GORAE FOREST LANDS FOR ORCHARDS.

It was stated recently by Mr. Bond, M.L.A., of Victoria, that arrangements were being made for an area of 4,000 acres to be excised from the State forest at Gorae, near Portland, and placed under the control of the Lands Department. When the necessary Parliamentary authority is obtained, this land will be opened up for orchard settlement.

Campbell's Creek.—The Campbell's Creek Fruitgrowers' Association is performing useful service. The President is Mr. D. Winkelmann, and the Secretary, Mr. N. O. Robinson. Apples are largely grown in this district.

## THE NEW HERCULES SPRAYER



Two guns at full 300 lbs. pressure—this is the achievement of the New HERCULES Sprayer, which consists of a 1½, 2½, or 3½ B.H.P. HERCULES Engine geared direct to a Metters' Power Pump. If you have a Power Sprayer already, let us quote you for fitting our engine or pump, or both. Write at once for particulars, or apply for a FREE DEMONSTRATION in your own Orchard.

**THE FARM & PASTORAL SUPPLIES**  
PTY. LTD.  
Machinery Merchants,  
500 BOURKE STREET, MELBOURNE

**FIGHTING INSECT PESTS IN THE ORCHARD.****Bryobia (Red Spider).**

The young mites are red, becoming brown when fully developed. This species is much larger than any of the common so-called Red Spiders. The eggs are red, globular. These are exceedingly plentiful on Apple trees at the present time. Mites, in feeding, produce a fine yellow mottling effect upon the leaves, eventually causing them to turn yellow and to drop prematurely.

**Remedies:** Lime sulphur in winter. Atomic sulphur applied at the rate of 10 pounds to 100 gallons of water have given excellent results. Nicotine sulphate of black-leaf 40 could also be used as a summer spray.

**Light-brown Apple Moth.**

See "Fruit World," August 1st, 1926, p. 372.

**Scale Insects.**

The young of San Jose, Apple Mussel, Red, Olive or Black Scales, etc., will be commencing to move. Use nicotine sprays.

**Erinose of the Vine.**

This is a Mite. They are silvery white or light yellow. They cause thick felt-like pads made on the under-side of the leaves, causing a swelling on the upper, and a depression on the lower surfaces of the leaves. They conceal themselves in cracks or under the bark or under the scales of the buds in winter, and appear in spring as soon as the buds open. The blisters cover the entire under-surface of the leaf.

**Remedies:** Sulphuring the vines early in the spring soon after the buds open, is usually sufficient to hold this mite in complete subjection. Lime sulphur 1-13 is also recommended as a winter spray.

**Codlin Moth.**

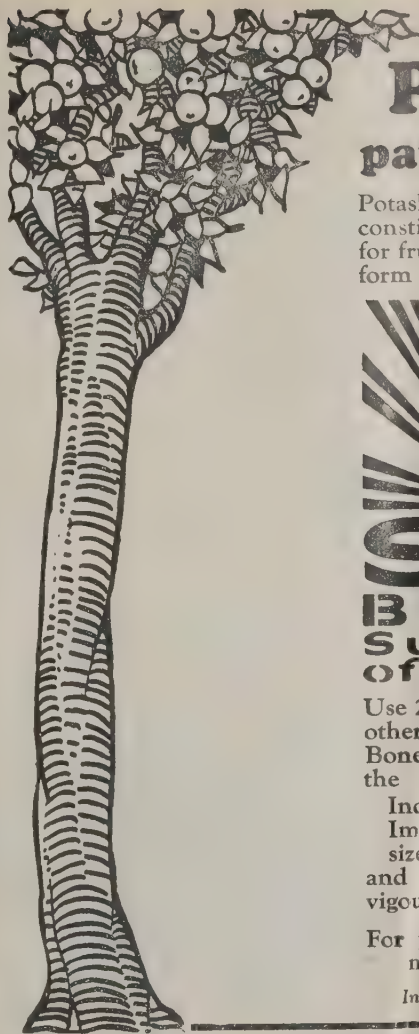
See "Fruit World," August 1st, 1926, p. 372.

**Cherry and Orange Aphids.**

See "Fruit World," August 1st, 1926, p. 372.

**The Black Citrus Aphid.**

This is a small dull-black aphid. Some of the adults are somewhat shiny black, and have been mistaken for the Black Peach Aphid. This species has been, and is still, very common on the young tips of Orange and Lemon trees. They are often found in citrus orchards throughout the year, all stages being present.



# Potash

## payson fruit

Potash is an indispensable constituent of all fertilisers for fruit trees, and the best form in which to apply it is



Use 2 cwt. per acre with other artificials (Super, Bone Dust, etc.) and watch the

Increase in yield  
Improvement in quality,  
size and colour of fruit  
and in the health and  
vigour of your trees.

For prices apply to your  
manure merchant.

Insist on "Sun Brand."

597

The presence of the insects on the larger and older leaves causes the leaves to have a curled appearance. When they are numerous on the young tips of the tree, these often turn black and die off, the thrips having sucked out the sap causing the damage.

**Remedies:** Any of the nicotine preparations, same as recommended for Thrips.

**Woolly Aphis.**

These insects have increased in some orchards during the winter months. It is advisable to spray at once with nicotine sulphate and red oil.

If the spraying is carefully carried out, excellent results will be obtained.

The Woolly Aphis parasite (*Aphelinus*) should be obtained from the Agricultural Department.

**Pear-Leaf Blister Mite.**

The work of this destructive mite makes its presence easily distinguishable from all others. Pear leaves are so affected as to produce reddish or dark brown spots, which become darker with age, and may spread so as to entirely cover and destroy the foliage. The mites pass the winter on the trees under the bud scales, and begin to work upon the leaves just as soon as the buds begin to open. The eggs are deposited in the tissues of the leaves, the young mites causing the small characteristic swellings frequently seen on the foliage.

**Remedies:** Lime sulphur, 1 in 13, has given good results. This should be used as a winter spray to destroy the hibernating mites. Spraying the trees with benzole emulsion, just when leaves are unfolding, is also recommended.



# Orchard & Vineyard Spraying.

Modern Equipment is Necessary.

**Reliability is an Essential Feature of the "Bave-U" Motor Pump.**

**W**HAT a splendid attribute is reliability. Some people, as well as some mechanical devices, have a certain surface glitter, but sooner or later inherent weaknesses become apparent.

What counts in the long run is that sterling quality—reliability.

There are some people whose company is acceptable for a limited period, but when it comes to the long, steady tramp of life, the one we value most is he, or she, who is always reliable.

When Cobham set out on his spectacular world flight, the one quality which he demanded of his engine was—reliability.

Equally so the fruitgrower demands—and rightly so—that in his necessary spraying work he shall have an engine and pump which is reliable—this week, next week; this year, next year, and all the time.

What would be the use of spraying equipment which failed at the moment when most needed.

There are times in the spraying to combat Black Spot, Codlin Moth, Scale, and other pests when the effective time is narrowed, and limited to particular days. Surely there must be no failure on the part of the spraying equipment then?

It is because of its sterling reliability that the "Bave-U" motor pump retains its premier position to-day throughout Australia and New Zealand. Machines have also been sent to South Africa to the satisfaction of the users.

The question which growers ask is, "Not how cheap, but how good?"

The reliability of "Bave-U" Motor Pump is seen in the fact that some growers have had theirs in use continuously for over 17 years. The

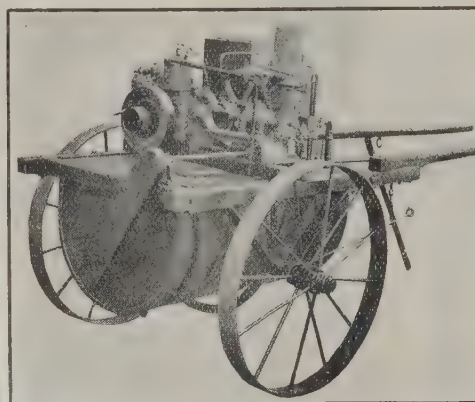
grower who bought his "Bave-U" pump 18 years ago recently called at the firm's works at Box Hill, Victoria, and ordered another!

The standard "Bave-U" power is made on approved lines. The engine of the sprayer is 4 h.p., and water cooled.

The crank shaft is cut from a solid block of steel. The bearings are made from phosphor bronze, and are exceptionally long.

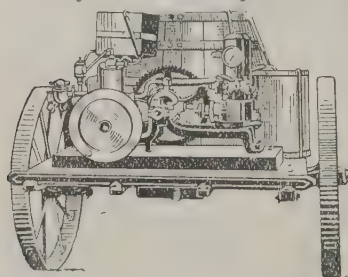
The pump is of duplex type; i.e., two separate pumps work side by side.

This is more expensive to manufacture, but its advantages over the double acting pumps are appreciated. A smaller machine, with 3 h.p. engine, and single plunger pump, is also made. All models are supplied on either 2 or 4 wheeled transports.



## BAVE-U POWER SPRAYER.

Mounted on (Perfect Balance) Type of Transport.



### BAVE-U POWER SPRAYER.

Made in Single and Double Plunges  
3 and 4 horse power

The engine and pump are on one bed, and are consequently rigid. The balance is so well adjusted that the "Bave-U" Motor Sprayer will do its work efficiently on any angle on a hillside.

In stating that the engine is 4 h.p., it is worth noting that a reserve power is built into the equipment. The engine will really do more work than is claimed for it.

When not in use for spraying, the engine is frequently used by growers for pumping water for irrigation purposes, driving a saw bench, chaff cutting, and for other purposes requiring power. At Mildura the windmills have been superseded because the growers have been more efficiently

able to use the "Bave-U" motors.

For vineyard spraying a special "Bave-U" tractor sprayer has been designed for the spraying of the vines.

Power is obtained from the wheels of the transport while in motion, both wheels being used. The equipment is so geared as to prevent any undue strain on the horse, while walking between the rows, and turning corners. At the same time the sprayer develops up to 250 lbs. pressure, operating five nozzles simultaneously.

Extension piping, which is connected with the sprayer, enables a row of vines to be sprayed on both sides, and from the top.

It is worth mentioning that the Toomuc Valley Orchards Pty. Ltd., of Pakenham, Victoria, have had no less than 13 "Bave-U" power sprayers. Growers who have given "repeat" orders include Young Bros, Ardmora, which brings their total up to six machines; T. E. Jones, Narre Warren; G. A. Syme, Killara; T. H. Petty, Doncaster; E. Stocks, Drouin, and many others, including Mr. H. G.

Brown, Auckland, New Zealand. These facts are of great interest, indicating, as they do, the confidence which users have in the "Bave-U" power sprayer for consistent orchard work.

### Display at the Melbourne Show.

At the Royal Agricultural Show, Melbourne, from September 16th to 25th, there will be an interesting display, which should be inspected by all fruitgrowers. Their stand is at No. 116 Smith-street. Any readers desiring further information on power spraying or the running of motor engines, are invited to write to Messrs. Russell, "Bave-U" Motor Sprayer Works, Box Hill, Victoria, who will gladly reply by return.

# HARVEY'S TRACTOR IMPLEMENTS

## Save Time, Labor and Money

"Harvey's" Tractor Plows have been known to excel in **VERY HARD LAND**, where no others could get into the ground

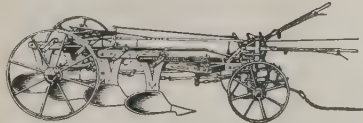
*Designed to Suit Any Make of Tractor*



"Harvey" 7-Furrow Shortboard Tractor Plow, fitted with D Steel Shares and Circular Coulters. (Model D2).



"Harvey" 7-Furrow Power Lift Tractor Disc Plow. (Model H.D.4).



"Harvey" 4-Furrow Stump-Jump Shortboard Tractor Plow. (Model S.J.21).

**The Patent Draught Hitch** enables the plow to work close up to the trees or vines, whilst the tractor is clear of the branches. It will handle the heaviest growth of weeds or cover crops with ease and simplicity

**The Power Lift** is controlled by a single trip rope

**The Harvey Patented Combination Hitch and Steering Device** permits setting plow out to right or left of tractor. The plow holds to the furrow when off set, and the rear wheel aids in short turns at the end

### An Old but Good Appreciation

I am getting on splendidly with my Tractor Plow; have about 70 acres broken up, and my neighbors cannot yet get into the ground, it is so hard.

CAPT. J. D. FOSTER

Epping, Tas.



Harvey 4-Furrow Power Lift Tractor Plow

Write for Catalogue and Full Particulars to

## D. HARVEY

TRACTOR IMPLEMENT MAKER  
BOX HILL, Melbourne, Aus.

AGENTS ALL STATES



# The Fruit Trade

## Market Reports and News Items

### BRITISH MARKETS.

#### End of the Season.

Mr. H. G. Colombie, Collins Street, Melbourne, received word on July 30, from Messrs. M. Isaacs and Sons Ltd., his London principals, that the "Barrabool's" shipment of Victorian and Tasmanian fruit, which was the last of the season, was disposed of at prices substantially higher than preceding shipments. The bulk of the cargo was sold, and while some realised 10/- to 15/6, the majority of consignments made from 11/6 to 14/-. These quotations relate to Tasmanian fruit. The Victorian Apples arrived in a ripe condition, and sold at prices ranging from 6/- to 11/-. The bulk of the cargo comprised Sturmers. The "Barrabool" left Hobart on May 18, with 50,000 cases from that port, and the trip took two and one-half months, so that the prices realised were rather surprising in some respects.

#### London (20/7/26).

Mr. J. O. Sims, Boro' Market, London, reported 2,000 cases of Tasmanian Apples ex s.s. "Hobson's Bay" met with an improved demand and prices were as undermentioned.

S.T.P., 7/3 to 10/-; Crof., 10/-; S.P.M., 9/9 to 10/-; Mostly, 9/- to 10/-; D.M., 11/-; R.K.D., 9/9 to 10/6; R.B., 9/3; Cleos., 7/3 to 9/6; S.P., 8/6.

#### Liverpool (14/7/26).

Messrs. J. C. Houghton and Co., 1 Temple Court, Liverpool, reported:—Apples—Tasmanian and New Zealand—The season is ending up badly, the general range of prices being such as will leave very serious losses to shippers all round. Efforts were made to uplift the market by restricting offerings. This policy met with some success, and was certainly justified, but it has only mitigated the evil, not removed it. Market to-day closed very weak. There is much that falls below the best standard of quality and condition among latest arrivals. New Zealand—Sturmers, 5/3 to 8/9; Lippiatt, 7/- to 8/9; Statesman, 6/- to 8/9; Dougherty, 6/6 to 8/6. Tasmanian—S.T.P., 4/6 to 8/3; Cleo., 4/6 to 13/3; F.C., 4/- to 10/6; Jon., 5/- to 8/6; S.P.M., 4/6 to 8/-.

### WEST AUSTRALIAN ORANGES.

#### London (21/7/26).

West Australian Oranges ex "Hobson's Bay" carried well, there being very little waste. This occurred chiefly in trays, which realised an average price of 4/6 a tray. Best lots made 14/- to 21/- a bushel case. A considerable portion of the shipment was unattractive in appearance, having brown spots on the skin. Oranges of this description sold at 10/- to 14/- a bushel case.

### ORANGES CARRY BADLY.

#### London (9/8/26).

Waste in the "Largs Bay's" shipment of Oranges amounts to about 10 per cent., necessitating repacking before sale. The quality of the fruit generally is excellent, although some is lightly spotted. Bushel cases are selling at 12/- to 16/-; exceptionally good to 18/-, and trays at 4/6.

### "BROWN HEART" IN APPLES.

#### Port Adelaide's Shipment.

#### London (17/8/26).

The Australian Press Association learns that importers of Apples, ex the steamer "Port Adelaide," which were said to be affected with "brown heart," intend to take legal action for damages against the shipowners.

### THE HAMBURG MARKET.

The Victorian Minister for Agriculture has received a report in connection with the shipment of Victorian Apples ex s.s. "Horatius," which was diverted to Hamburg on account of the strike. Prices realised were good, ranging from 10 and 11 to 13 marks, some Cleopatras as high as 20 marks, Munroe's, 19 marks. Tasmanian Pears off the same boat also arrived in very good condition, and realised good prices.

Messrs. Aug. Stier, of Hamburg, report that the Victorian Apples generally were not well assorted, and of only ordinary quality. There were only a few lots of Cleos., Dunns and Jonathans of really prime, clean quality. About 1,000 cases of this cargo were of very inferior quality, and discharged with a great percentage of deterioration, and should not have been exported. There was also a large percentage of small fruit, and

buyers at Hamburg made a great difference between Apples of small size, 2 inches and 2½ inches, and medium and large size, 2½ inches, 2¾ inches and 3 inches. The small Apples realised very often M.4 and M.5 less than the larger sizes of the same growers.

Messrs. J. H. Lutten and Son, report that there were several lots spotted and withered, and some showing a certain percentage of decay.

Messrs. Ph. Astheimer and Sohn, report that in spite of these facts, demand proved to be very strong, and sales were attended by a great many buyers from the interior.

### AUSTRALASIAN MARKETS

#### New South Wales.

#### Sydney (24/8/26).

Mr. F. Chilton, City Fruit Markets, Sydney, reports:—Queensland fruits:—Bananas, 14/- to 24/- per case; Pines, Smoothleaf, 7/- to 10/-; Custard Apples, 4/- to 7/- per quarter case; Tomatoes (North Queensland), 5/- to 16/- per half case. N.S.W. fruits:—Bananas, 14/- to 24/- per case; Lemons, yellow, 4/- to 7/6 per bushel case; Oranges, 4/- to 9/-; Navel, 7/- to 13/-; Mandarins, Emperor, 7/- to 15/-; eating Apples, Granny Smith, 9/- to 16/-; Grapefruit, Shaddocks, etc., 4/- to 8/-; Seville, 4/- to 6/-; Passions, 5/- to 20/- per half case. Victorian fruits:—Apples, Jonathan, 6/- to 11/- per bushel case; Pears, Josephine, 12/- to 18/-; P.T., 11/- to 15/-; W.C., 8/- to 15/-; Tasmanian fruits:—Apples, S.P.M., 6/- to 12/- per bushel case; F.C., 6/- to 9/-; Jonathan, 6/- to 12/-; Cleo., 6/- to 12/-; C.P.M., 6/- to 13/-; Dem., 7/- to 14/-; S.T.P., 5/- to 8/-; Pears, W.N., 3/6 to 7/- per half case; W.C., 3/- to 7/6.

Although the market is heavily supplied with Apples, choice red sorts are selling well at slightly advanced prices. Choice Mandarins and Oranges are also selling well. Pines are overstocked, consequently prices are much lower.

#### Victoria.

#### Melbourne (23/8/26).

The following were the ruling wholesale quotations at the Western Market yesterday:—Apples, good to choice eating, 6/- to 10/-; good to choice cooking, 5/- to 9/-. Bananas, Queensland, 16/- to 25/- double; Lemons, Victorian, 6/- to 8/-; Mandarins, N.S.W., 7/- to 14/-; Oranges, Mildura, 8/- to 10/-; N.S.W., 7/- to 8/-; South Australian Navels, 11/- to 14/-; Navels, 7/- to 13/-; Pineapples, Queens, 10/- to 12/- double.

**Queensland.****Brisbane (21/8/26).**

The market was steady for Apples and Pears. Custard Apples and Papaws were selling fairly well. The Citrus market was good for quality fruit, and low grade was hard to sell. Quotations: Bananas, Cavendish, 1d. to 9d. per dozen; Ladies Fingers, 1d. to 8d.; sugars, 1d. to 6d.; Oranges, large, 9/- to 11/-; small, 4/6 to 7/6; Mandarins, large, 16/- to 22/-; small, 6/- to 9/-; Papaws, 3/- to 4/6 per bushel case; Custard Apples, 4/- to 6/-; Pines, smooth, 6/- to 7/- per case; rough, 4/6 to 5/6; Apples, Tas. Democrats, 14/- to 15/- per case; Jon., 2½in., 13/- to 14/6; 2½in. to 2½in., 10/- to 12/-; 2in., 6/- to 8/-; second quality Jonathan, 2½in., 11/- to 12/-; 2½in. to 2½in., 7/- to 9/-; S.P.M., 2½in., 11/- to 13/-; 2½in., 9/- to 11/-; small, 5/- to 7/-; Croftons, 12/- to 14/-; A.R.O., 2½in., 12/- to 13/-; 2½in., 9/- to 10/6; 2½in., 7/- to 8/6; N.Y.P., 10/- to 13/-; S.T.P., 2½in., 9/- to 10/-; 2½in., 8/- to 9/-; 2½in., 7/- to 8/-; F.C., green, 11/- to 12/-; yellow, 7/- to 9/-. Pears were in demand, and the following rates ruled for Victorian offerings:—W.N., 16/- to 18/- per case; Jos., 18/- to 20/-; W.C., 14/- to 17/-; B.B., 15/- to 17/-; Apples, Victorian, Jon., 2½in., from 13/6 to 14/6 per case; for fruit in stale and soft condition from 10/- to 12/- was hard to obtain; for 2½in., 9/- to 11/- per case ruled; and 2½in., 7/- to 8/-; for Rome Beauties, from 10/- to 11/- per case.

**Tasmania.****Hobart (14/8/26).**

The fruit market is firm for all good varieties. Small and inferior grades are still quiet. Prices were as follows:—S.P.M., best grades, 7/6 to 8/8; fair, 6/- to 7/-; medium, 4/- to 5/-; small and shrivelled, 2/- to 3/6; Democrats, good, to 9/7; market lots, 4/- to 5/7; R.B., choice, 8/9 to 9/7; prime, to 8/1; medium, to 6/-; C.P.M., good, to 8/3; fair, to 6/-; F.C., good,

6/1; medium, 5/-; N.Y.P., medium, 5/- to 5/6; small and withered, 2/6 to 4/-; Jon., choice, 6/10 to 7/3; medium, to 5/5; small, to 3/6; F.C.P., small and medium, to 4/3; A.R.O., medium, 4/-; S.T.P., No. 1, good, 5/- to 5/9; medium to fair, 4/- to 4/9; small and withered, 2/6 to 3/9.

**South Australia.****Adelaide (21/8/26).**

Prices ruled as follows:—Apples, eating, 8/- to 9/- per case; do., cooking, 6/- to 7/- per case; Bananas, 30/- to 32/- per case; Lemons, 6/- per case; Melons, pie, 10/- to 12/- per case; Oranges, common, 7/- per case; do., Blood, 8/- per case; do., Mandarin, 10/- to 12/- per case; do., Navel, 10/- to 12/- per case; do., Poorman, 5/- to 6/- per case; Passion-fruit, 60/- to 65/- per case; Pears, eating, 10/- per case; Pineapples, 12/- to 14/- per case.

**Western Australia.****Perth (14/8/26).**

Apples, Dunn's, prime, dump cases, 12/6 to 15/6; special, 17/6; flat cases, 7/- to 9/-; others, dumps, 7/- to 11/6; Cleopatras, prime dumps, 12/6 to 16/3; flats, 6/- to 9/6; others, dumps, 5/- to 11/6; Granny Smiths, prime dumps, 15/- to 18/6 (a few to 20/6); flats, 9/- to 12/-; others, dumps, 11/- to 14/-; Yates, prime dumps, 14/- to 17/6; special to 19/9; flats, 6/- to 10/-; others, dumps, 7/6 to 12/6; Rome Beauties, prime dumps, 13/- to 16/6; flats, 7/- to 9/-; others, dumps, 7/6 to 12/-; Doherty's, prime dumps, 13/- to 17/9; flats, 5/- to 8/-; others, dumps, 8/- to 12/-; Rokewoods, dumps, 8/- to 14/-; special, 16/-; flats, 6/- to 10/6; Chandlers, dumps, to 13/-; Statesman, dumps, 12/- to 15/3; Oranges, flats, 2/- to 4/-; special, 6/6; Navels, dumps, 5/- to 10/-; special, to 14/6; flats, 2/- to 6/-; special, to 14/-; Seville, flats, 5/- to 10/9; Mandarins, flats, 5/- to 10/6; a few to 17/6; Lemons, flats, 2/6 to 5/-; special, to 8/-; Passion-fruit,

small cases, 7/6 to 11/-; Cape Gooseberries, 6d. to 7d. per lb.

**New Zealand.****Dunedin (12/8/26).**

Messrs. Reilly's Central Produce Mart Ltd. report a nice shipment of citrus fruit (about 2,300 cases) per "Waikouaiti," which met a keen demand. Choice dessert Apples and Pears are wanted, and command good values. Prices ruled as follows:—Pears, choice desserts, to 4d.; cooking, 2½d.; Tomatoes, Raratongan, to 1/3; Apples: Delicious, to 12/-; Sturmers, to 10/6; Jonathans, to 9/6; other desserts, 5/- to 7/6; choice cookers, to 7/6; Lemons, to 26/-; Mandarins, Sydney's, 26/-; Adelaides, 28/-; Oranges: Raratonga re-packs, 27/6; Poormans, N.Z., to 14/-; Adelaide's, 18/-; Sydney Navels, 25/-; Adelaide Navels to 24/6; choice smooth skinned Sevilles, 20/-; Bananas: Green, 29/-; ripe, 37/6; Pines, 25/-.

**Citrus Fruits.****Melbourne (20/8/26).**

V.C.C.A. market representative reports for the week ending August 20th:—Stocks of Navel Oranges came to hand more freely. The general tendency is for prices to ease all round. Prices:—Navel Oranges—A quality, special—60's, 10/-; 75's, 11/-; 84's, 12/-; 96's, 13/-; 108's-112's, 14/-; 126's-140's, 15/-. B quality special—60's, 9/-; 75's, 10/-; 84's, 11/-; 96's, 12/-; 108's-112's, 13/-; 126's-140's, 14/-. C quality, special—60's, 8/-; 75's, 9/-; 84's, 10/-; 96's, 11/-; 108's-112's, 12/-; 126's-140's, 13/-. Standard grade on the three qualities, 1/- lower. Common Oranges—New South Wales, 7/- to 9/-; Victorian, 10/- to 13/-. Mandarins—A quality, special large, 14/- to 16/-; B quality, special large, 13/- to 15/-; medium, 9/- to 12/-; small, 6/- to 9/-; Lemons, 6/- to 8/-.

**FRUIT SHIPMENTS — TO NEW ZEALAND****REILLY'S CENTRAL PRODUCE MART LTD., DUNEDIN**

advise Growers of CHOICE FRUITS to ship to Dunedin

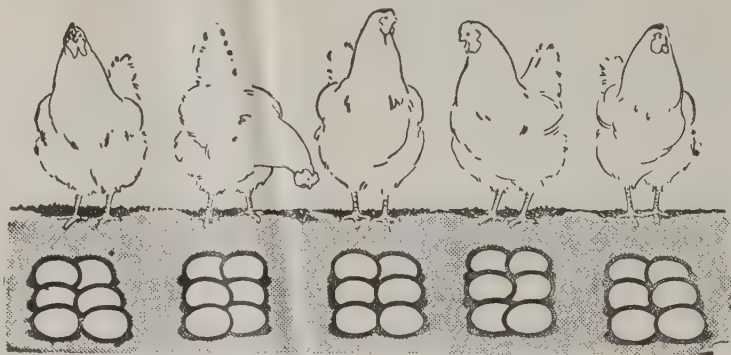
**REILLY'S** anticipate a keen demand for all lines of choice Fruit arriving on this market between the months of July and December.

**REILLY'S** offer Fruitgrowers their faithful service and will be pleased to advise Fruit Shippers the probable prices available and prospects of making suitable sales.

Cable or write to **Reilly's, Dunedin**. Codes used—BENTLEY'S, MARCONI'S, WESTERN UNION, A B C 5th & 6th Ed.

**REILLY'S GUARANTEE FAITHFUL SERVICE TO ALL CONSIGNORS.**





## This should be a good month for Eggs

Are your fowls giving you a worth-while supply?

**I**F not, there is something wrong with them. This does not necessarily mean that they are ill, but that their natural egg-laying capacity is being handicapped by some defect either in the feeding or by the adverse effect of these chilling westerlies. No matter which of the two is the cause or whether it is the combined influence of both, your fowls can be converted from "loafers" into active layers. All that your birds need is a tonic—a natural one; one that will build up a store of energy, and which will act as a direct stimulant upon the egg-cells. Thousands of poultry owners and "back-yarders" who have previously experienced a shortage at this time of the year, are now definitely avoiding it by giving their fowls Karswood Poultry Spice (which contains dried and ground insects). The real reason for the superiority of Karswood is that it provides a fowl with the necessary ingredients which her nervous system needs, and which if deprived of, she extracts, by absorption, from the egg-cells with which she is naturally endowed. When her bodily health hasn't to depend for stimulation upon the rich ingredients of the egg-cells, they in turn just naturally grow and a regular supply of eggs is the result. Here is what one of the thousands of Karswood users says:—

### Twice as Many Eggs.

Dear Sirs,—

Your advertisement in the "Evening Sun" this week came to my notice. I have a small poultry farm, and am a very enthusiastic user of Karswood. My first trial of it was on a yard of second-season hens; the result was they gave twice as many eggs in that season as they gave in their first season.

I find it brings the young table birds on very rapidly; at three months old on Karswood, they are equal in size to five months old without Karswood. That means a smaller feed bill and quick returns.

I am over-stocked with the empty 7lb. tins, and am wondering if you have any idea of collecting and buying the tins back again; it is rather a problem how to dispose of them, and they are too good to throw away.

(Signed) MISS M. SHORT.

Corrie Road, P.O., North Manly.

### Good Results from Karswood.

Dear Sirs,—

I am just writing a few lines to let you know that I have been using Karswood Poultry Spice from the 29th June on 9 hens, and they started to lay after the first week I used it. To tell you the truth I have had such

good results that I have decided to keep on using it, and I must say that 7 of those 9 hens have laid 112 eggs from the 1st of July to 31st. You may use this letter in any way you think fit.

(Signed) A. T. PETERS.

Charlton Avenue, Pymble.

### Best of Them All.

Dear Sir,—

Would you kindly forward to me one two-shilling packet of Karswood Poultry Spice, as my fowls have been without it one week, and they are going off laying. It is the best of them all. I have tried others, and think they are not worth the cardboard that is around them to produce eggs.

(Signed) T. H. COLES.

Swan Creek, Ulmarra, N.S.W.

### Nearly Double the Number of Eggs.

Dear Sirs,—

I would like to express my appreciation of Karswood Poultry Spice. Since using same I get nearly double the number of eggs, and the hens get over the moult much quicker. I have used Karswood for years, and would not use anything else. I have recommended Karswood to a number of friends, and their experience has been the same as mine.

(Signed) VERA SHERWILL.

Officer, Victoria.

### Make This Test.

Go to your local grocer, store-keeper, or produce dealer. Get a 1/- packet of Karswood Poultry Spice, then give it to half-a-dozen of your birds in accordance with the directions on the packet. Do not expect immediate results—Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

### Note the Economy.

- 1/- packet supplies 20 hens for 16 days.
- 2/- packet supplies 20 hens for 32 days.
- 13/- (7lb. tin) supplies 140 hens for 32 days.

### Supplies.

Karswood Poultry Spice is obtainable from all stores and poultry food suppliers at the following standard prices;  $\frac{1}{2}$  lb. packet, Price 1/-. 1lb packet, Price 2/-. 7lb. tin, Price 13/-. 14lb. tin, Price, 25/-. 28lb. tin, Price 48/-.

If your local dealer cannot supply you, write direct to Henry Berry & Co. Pty. Ltd., Collins St., Melbourne, adding postage—6d. on  $\frac{1}{2}$  lb. packets, and 9d. on 1lb. packets—to the above prices.



## POULTRY.

## Size of Eggs.

## As Affected by Breeding, Feeding, and Environment.

AT NO PREVIOUS TIME in the history of poultry-farming has so much attention been directed to size of eggs (writes the Poultry Expert of the Department of Agriculture in current notes). Even poultry-farmers themselves are hailing the grading of eggs as if their salvation depended upon producing eggs of great size, but many are negligent of the factors which are responsible for the small egg.

The first of these factors is that many eggs under 2 oz. in weight find their way into the incubators. This, of course, is the first step to the perpetuation of the small egg trouble. The moral is, "Don't set small eggs."

Loss of stamina and physique are the two main factors in pulling down the size of eggs. There are no surer signs of degeneracy in a breed or strain than falling off in this particular; therefore, under-sized eggs should be as the writing on the wall to the poultry-farmer—a warning that his flock is degenerating.

## Now is the Time.

It follows that every effort should be made to maintain a reasonable standard of size of egg. It is at hatching time—right now—when much can be done in this direction. If we would raise the standard of eggs in both size and quality we must attend to other features besides the rejection of small eggs. We must reject all undersized birds as breeders and attend to those points to be watched in respect to preservation of purity of breeds. Then we must see to it that we secure good development in the chickens that are being reared. In this connection there are three prime factors: breeding, feeding, and environment. The last means, in this case, good brooding and good subsequent rearing conditions.

The main difficulty met with in connection with the first of these three factors is a disposition on the part of many farmers to attempt short cuts.

In place of good breeding, for instance, they are apt to trust too much to reputed performances, and too little to actual value as seen in the birds themselves. There is only one remedy for this, and that is for every farmer to acquire a working knowledge in respect of quality of the breed he is keeping or is about to introduce to his yards, because what is not outwardly visible is not there, no matter what pedigrees are behind the birds.

## Avoid Fads in Feeding.

The next factor is feeding. Here again, in place of feeding rationally on simple foods which universal experience has proved and experiment confirmed as efficient for all requirements, there is a tendency to follow every fad and fancy. Observations on this matter go to indicate that the cost of feeding chickens over a great part of the poultry industry is 20 to 30 per cent. higher than it would be were it possible to eliminate all superfluities from the ration. This is a serious matter in these times of high cost of feeding, and it will pay the

farmer to revise his methods and return to the simple fare advocated by the Department.

In this connection, too, a lesson is needed in regard to how long chicken mixtures and other expensive items in the ration should be continued. There is no need, nor is it even advisable to continue to feed chicken mixtures, or in fact any special article of diet, beyond six weeks of age.

How many feed chicks up to twelve weeks and even longer on baby chicken fare? Chickens of this age are quite able to eat whole wheat and cracked maize, but the reason why so many continue to feed chicken mixture is because they think the chickens are not equal to eating the whole grain.

This is a mistaken notion, and its deceptiveness only becomes apparent when the change is made from the small ground grains and tit-bits in the mixture. The chickens naturally do not take kindly to the change. Hunger will bring them to it, but the effects of the change can be minimised by adding a little of the whole grain to the mixture for a while before feeding whole grain only.

With regard to the third item, brooding, one sometimes sees farms that are poorly equipped in regard to rearing plant, but where excellent results are obtained. Other farms come under notice where the equipment is almost all that could be desired, and yet there is failure to secure satisfactory results.

All this points to the fact that the

## A REMARKABLE FACT!



IS THE ONLY SELLING FLOOR IN THE  
— STATE OF NEW SOUTH WALES —

entirely engaged in the disposal of

POULTRY KEEPER'S PRODUCE ONLY

We fight to maintain the price of the product we handle, and being disinterested in any other farm product, have no need to encourage price cutting to sell other lines. We sell on a commission basis only, and the greater the price realised the more it is to our advantage

Essentially a Poultry Farmer's Selling Floor

## The Australian Poultrymen's Trading Organisation

TURKEY, EGG AND POULTRY SALESMAN

7, 8 and 9 MUNICIPAL POULTRY MARKETS, ULTIMO  
ROAD, HAYMARKET. Phone: City 1154.

Crate and Egg Case Labels Posted on Application.



personal equation is the prime factor in the rearing of chickens, ability under which heading is the one great essential to successful poultry-farming.

### Market Report.

The month has been one of great potency as far as poultry values are concerned, but unfortunately the high cost of production has effectively operated against any great jubilation on the part of consignors. Orchardists have contributed liberally enough to the month's wonderfully heavy supplies, but we venture to hope that on a season strong in green feeds dire necessity should not have been the compelling force in inducing such consignments. As we see things, the most important matter for poultry breeders nowadays is that of cost of production, and we believe that on farms where green stuff is plentiful, and its application rightly understood, the key to the problem is close handy. Bigger shipping needs, combined with an ever growing city, have maintained a great demand for cockerels, and on the past month's prices, such can only be classified as pure luxuries, practically beyond the buying power of working folks. Coloured cockerels have touched 16/-, and White Leghorns 12/- on lines of rates running from 8/- for small stuff right upwards without any serious gap, and this season it seems as if high rates must continue right on to Christmas.

Hens, all breeds, have been dear enough, although, under pressure of wonderfully big supplies, sometimes a bit unsteady, and it is just possible that from now onwards somewhat lower prices may have to be accepted. White Leghorns have given least trouble to salesmen, mainly because farmers have been operating very freely for stocking purposes. It is always a remarkable trait of poultry crisis times, that while many breeders find it necessary to sell or at least reduce flocks, other farmers are as anxious to make increases. The momentary trend of the industry would seem to be in favour of somewhat fewer, but certainly larger, flocks.

Muscovy ducks, meaning drakes as well, have sold fairly well. The month has not carried great quantities, but many things point to an early season, and before long plentiful supplies should be forthcoming. We do not anticipate lower rates for some time ahead.

Turkeys do not greatly interest orchardists, and it may be enough to say that high values have ruled, and may continue for a week or two yet.

Prices, per pair:—Poussins, 1/2 to 3/2; grillers, medium to prime heavy, 4/6 to 7/6; W.L. cockerels, 8/- to 12/1; coloured cockerels, small, 8/- to 9/6; medium, 10/- to 12/-; heavy, 12/6 to 16/10; W.L. hens, 5/4 to 7/7; col. hens, light, 5/6 to 6/6; medium, 7/- to 8/6; heavy, 9/- to 11/-; Muscovy drakes, 13/- to 18/-; Muscovy ducks, 7/6 to 10/-; turkey gobblers, 25/- to 57/6; turkey hens, 15/6 to 30/6; Guinea fowls, 9/4, 9/6; geese, 9/-, 9/6.—“A.P.T.O.,” report, Sydney, 13/8/26.

### BEEES AND HONEY.

#### The Odors of the Hive.

So many different odors emanate from the bee-hive under various conditions that it would not be possible to describe all of them, writes Mr. G. S. Demuth in “Gleanings in Bee Culture.” For instance, the hive odor while brood-rearing is in progress is different from that during the winter when brood-rearing is not in progress. Again, the odor changes as the bees work upon different flowers. When they are ripening nectar it is often possible to tell what kind of flowers the bees are working on by walking through the apiary.

Odor is apparently an important factor in the economy of the bee-hive, but most of the odors which affect the bees cannot be distinguished by man. For instance, when a swarm is being hived, the bees which discover the entrance and begin entering the hive set up a peculiar hum apparently calling their comrades. It is now thought, however, that the vibration of the wings drives the odor from these bees to the others and that they are informed that an entrance has been found by means of the odor rather than by the sound. Apparently, too, the bees distinguish the members of their own colonies by means of odor to a large extent, so the defence of the hive is to this extent a matter of odor.

Odor is also probably an important factor in introducing queens, the bees, it is thought, being antagonistic to the new queen on account of her difference in this respect.

### SPRAYING DURING FULL BLOOM DETRIMENTAL TO HONEYBEES.

Ever since fruit trees have been sprayed with arsenicals, beekeepers have been much interested in the effects of the practice on the mortality of honeybees. They have long felt that many bees were poisoned as a result of spraying.

The entomologists of the United States Department of Agriculture planned and conducted a series of experiments, the results of which are discussed in Department Bulletin No. 1364-D, says the “National Nurseryman” (U.S.A.).

It was ascertained that spraying during full bloom was detrimental to bees. It was also determined that spraying at the customary time under nearly ideal conditions was not injurious to the bees; but nearly ideal conditions seldom occur.

Of course, the beekeeper does not want his bees poisoned, but the loss of honey is only secondary in comparison with the loss from lack of cross-pollination of flowers.

In using arsenicals as a control for the codlin moth the best results are in nearly all cases obtained by applying the first spray after most of the petals have fallen, although in commercial orchards, where hundreds of acres of trees must be sprayed within a limited time it is necessary to begin spraying early in order to finish the work before the calyx cups close.

Because the codlin moth can be as well controlled by spraying when 90 per cent. of the petals have fallen, entomologists recommend spraying at that time rather than during full bloom, especially since it has been definitely proved that spraying when trees are in full bloom is injurious to insect pollinators.

A lame excuse may be better than nothing, but you can't travel very far on it.

### IS IT A STOMACH COUGH?

If your cough is a chest cough, this does not interest you. But if it is due to stomach disorder, and is accompanied by a furred tongue, phlegm in the throat, and a general feeling of “gone-ness,” it is time you took a dose of A.M.S. This herbal extract is a wonder worker, and a positive cure for Indigestion and Liver troubles. A few drops after every meal is keeping thousands in perfect health, and buoyant spirits. A.M.S. costs 3/- a bottle, by post 3/6, and can be procured from all chemists or country stores, or direct from T. A. Dickson, Chemist, Geelong, Victoria.

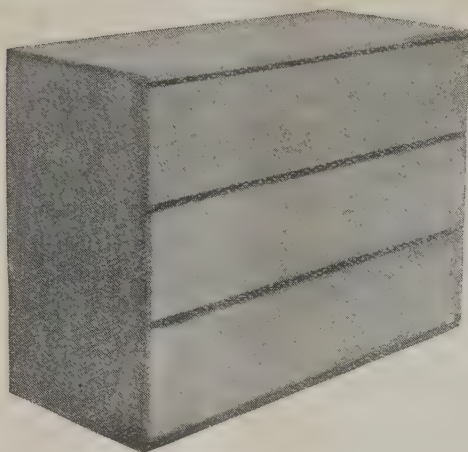
## FRUIT TREES

CLEAN, HEALTHY,  
.. WELL-GROWN ..

All the Leading Varieties  
Correspondence Invited

**J. W. LAWREY**

Kinglake Nurseries YARRA GLEN, Vic.



Australian Apple and Citrus Dump Bushel Case.

## SOFTWOOD CASES

(IMPORTED)

*Cheaper than hardwood if exported.*

*Cut to Australian Standard Sizes*

DUMP BUSHEL with one piece top and three equal piece side

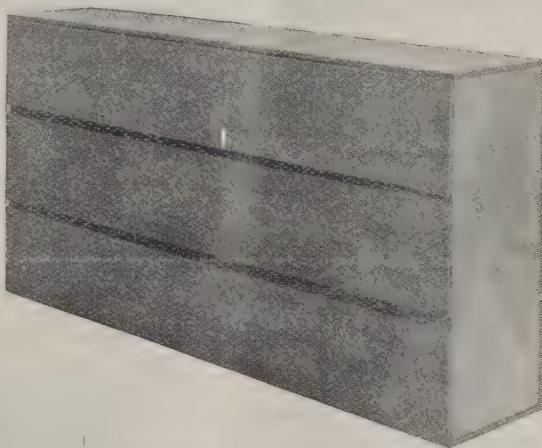
UPRIGHT BUSHEL with one piece top and three equal piece side

DRIED FRUIT CASE with one piece side and two equal pieces tops and bottoms

CANNED FRUIT with one piece side and two piece tops and bottoms

### SOME ADVANTAGES IN FAVOR OF IMPORTED CASES

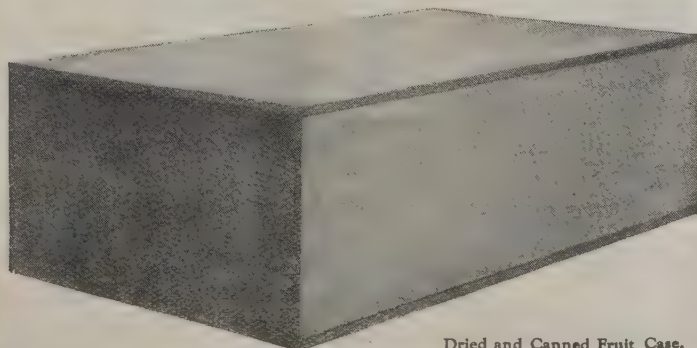
- (1) Full drawback of duty allowed on all cases exported.
- (2) 1/3rd less freight than on Hardwood cases.
- (3) 25% rebate on rail freight for full trucks.
- (4) All timber cut to exact sizes making it an easy matter to assemble a symmetrical case.
- (5) Every piece of timber fit and ready for use, thereby eliminating waste.
- (6) Can be supplied in shooks or made up and branded.



Upright Bushel Case with Centre Partition.

Particulars from the Largest Importers

## Overseas & Interstate Trading Co. Ltd.



Dried and Canned Fruit Case.

22 Market Street,  
Melbourne

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Phone Central 9110

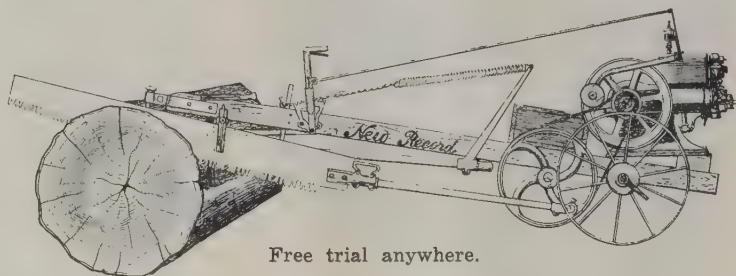
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Also  
King William Street,  
ADELAIDE



# The "NEW RECORD"

One Man  
Motor Cross Cut Saw  
With Tree-Falling  
Attachment  
Reliable, Efficient  
and Economic



Free trial anywhere.

The Fastest Machine on the Market

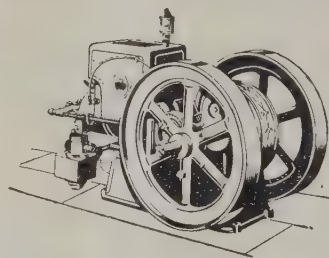
More than 700 in use in Australia

The "New Record" Petrol and Kerosene Engines,

2 h.p., 3½ h.p., 5½ h.p., 7½ h.p.

The high efficiency of these engines is due to their superior design and to the accuracy of the workmanship.

We guarantee every Engine to be free from defects in material and workmanship, and we will furnish, free of charge at our works, any part proving defective in material or workmanship within five years from date of purchase.



## POWER PUMP — DIRECT COUPLED PUMPING OUTFITS

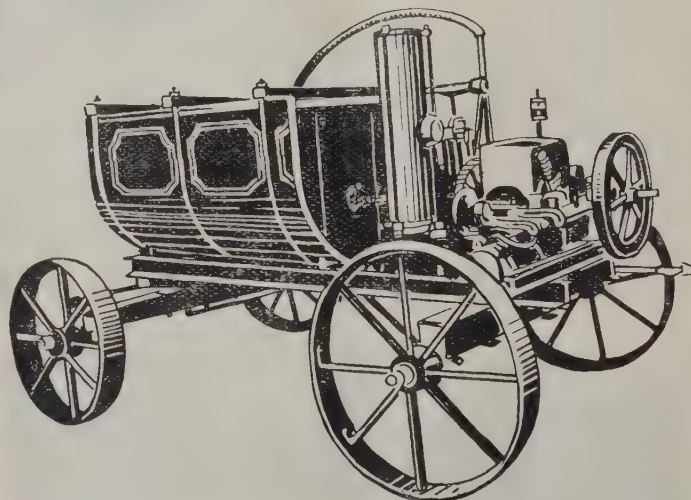
The "New Record" Motor  
Sprayer.

fitted with 2 h.p. Petrol Engine.

The Outfit with surplus power, keeps 2 to 4 nozzles going at 250 lbs. pressure.

Simplest and most efficient power sprayer built.

Porcelain-lined cylinders, patent outside bronze ball valves.



All "New Record" Products  
are Made in Australia

WRITE NOW TO  
OR CALL AT

**Tree-Clearing Machinery Co. Pty. Ltd.**

112-114 Rosslyn Street, West Melbourne

Take West Melbourne Tram in Elizabeth Street

Tel.: F 3905

## CULTIVATION AS A FACTOR IN FRUIT PRODUCTION.

Cultivation is one of the most important operations in connection with the production of fruit, but how often is it neglected or carried out in a perfunctory manner? It is in a summer like the past—dry and hot beyond the ordinary—that the effects of good cultivation are evident, and the ill-effects of poor or neglected cultivation are brought home to the grower. Undersized fruit and poor growth are the inevitable result of indifferent cultivation.

The extent of the grower's losses depends, of course, to some extent upon locality, soil, and variety of fruit grown, etc., but a tour of the different fruit-growing districts reveals the fact that many otherwise fine orchards have been neglected, with consequent loss to their owners (write officers of the New South Wales Agricultural Department, in their current notes). On many of these orchards much fruit is undersized, and the trees have made poor growth and showed signs of distress. Not only is there present loss in such cases—there is prospective loss as well. The trees have leeway to make up, and this takes time and effort and outlay. Growers who have been remiss should try to reckon up their losses. It will impress upon them that next season early and well-directed efforts should be made by thorough and judicious cultivation to keep moisture in the ground for the use of the trees. A good surface mulch, well maintained, is of incalculable value. Do not let the surface cake, and do not let



Cultivating the Orchard.  
Mr. G. T. Herbert's Plum Plantation, Diamond Creek.

the weeds grow and rob the soil of moisture which is badly needed by the trees.

There are many factors which adversely affect fruit production, but given thorough cultivation trees will stand a good deal of dry weather and develop good crops. The business-like grower realises this, and cuts his losses to a minimum by avoiding unnecessary risks. Every year he cultivates well. He has an enormous advantage over the orchardist who is careless as to his cultural work, and

can calmly face conditions which spell disaster to the other.



(GIBBS BRIGHT & CO.,—See Page xiv.)

### SUPPORT CO-OPERATION

By Consigning your  
FRUIT to the

### Producers' Distributing Society Ltd.

(Late Coastal Farmers' Co-operative  
Society Ltd.)

—Agents for—

"BLACK LEAF 40"

and all Orchard Requirements

|            |           |
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| Melbourne  | Sydney    |
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ESTABLISHED 1891

## AUG. STIER

### FRUIT BROKER, Fruchhof, HAMBURG

Telegraphic Address: FRUTERO, Hamburg.  
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J. B. MILLS & CO., 9 Queen St., Melb.

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SILBERT SHARP & DAVIES

Clyde Street, Hobart, Tasmania



### ADVERTISING AUSTRALIAN FRUIT.

Through the courtesy of Mr. Vincent Ellingworth, fruit exporter, 440 Little Collins Street, we have received a copy of some of the propaganda issued by the Australian Fruit Advertising Council, London, whose advertising is being handled by Mr. L. St. Clare Grondona (formerly of Sydney), a director of Messrs. David Allens. Mr. Ellingworth was associated with Mr. Grondona in the work of making Australian products known at the Australian Pavilion, British Empire Exhibition, Wembley, 1925, where much good work was accomplished. Millions of people for the first time tested for themselves the quality of Australian Apples, Oranges and dried and canned fruits; while lecturers explained hourly through the loud speaker the hygienic conditions under which these fruits are grown and marketed, and urged the British people to give preference to the produce of their fellow-Britons overseas.

The advertisement occupied a full page of the London "Daily Express" on April 20, and depicted several of the Australian cricketers, one taking a difficult catch of an Apple. In addition, the following letterpress appeared, the whole forming a very striking and attractive advertisement:—

### THEY'RE HERE FROM AUSTRALIA.

The Australian cricketers have arrived and Australian Apples, too—both in perfect condition, and the latter in bountiful profusion. There are no better Apples than Australian Apples. There are none more delicate in flavor, and all have that clean, sharp, refreshing taste which distinguishes the Apple from all other fruit. Now is the time to take Australia's orchard harvest and thus exchange Empire wealth. The Australian fruitgrower is of your own race. He is a strong supporter of British industries. He exchanges value for value—pound for pound.

#### Eat Australian Apples:

Now at their best! Buy them today at your fruiterer's.

Now, in spring, is the time when the system calls for fruit—ripe, mellowed fruit—Nature's own health diet, a truer corrective than any mineral salt known to science. A very famous scientist has said: "It astounds me that millions of pounds should be spent annually in laxatives and correctives in bottles and tubes, which are far more beneficially and economically present in the ordinary Apple." Fruit is Nature's purifier. Keep fit on fruit.

### THE ROTARY HOE-CULTIVATOR.

#### For Orchard Work.

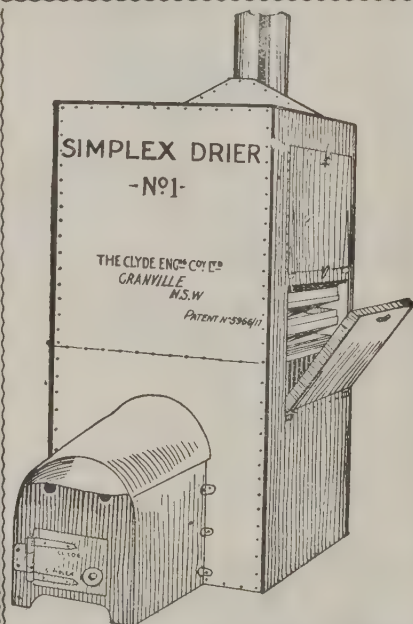
Rotary Hoe Cultivator makes tractor work economically possible on sandy hillsides, where farmers and orchardists find other means of cultivation too costly.

The Rotary Cultivator does its work by means of cutting blades, which operate in much the same way as an ordinary hoe. The blades are attached radially to flanges, which are welded on to a tubular spindle, and revolved by power applied direct from the engine through the pulley shaft; no pulling whatever being on the road-wheels. The power transmission is by high-grade Coventry chain running on machine cut chain wheels, fitted with best English ball-bearings, thoroughly enclosed and running in oil.

The fact that it maintains its own traction obviates any tendency for the tractor wheels to slip.

The cultivator can be put on the tractor in about 15 minutes. It is attached rigidly to the tractor, and can be turned as short as the tractor will turn, and backed for getting into corners, etc.

It is a good stump jump implement, and automatically lifts out of the



## The Clyde Simplex Driers

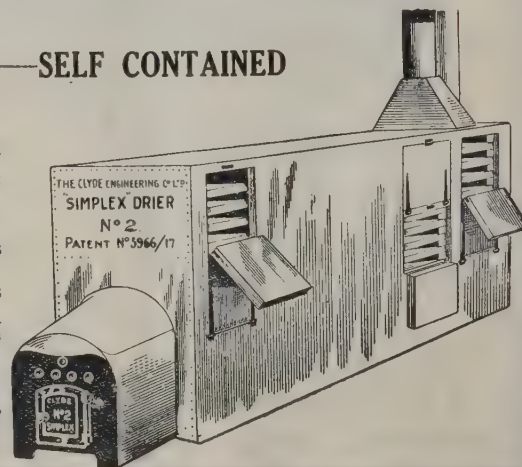
For Drying  
Fruit, Vegetables and other Products

NO MORE WASTE FRUIT OR VEGETABLES

SIMPLE — SELF CONTAINED

Made in Sizes to suit

Householders  
Small Orchardists  
... OF ...  
Large Factories



The Clyde Engineering Co. Ltd.  
GRANVILLE, N.S.W.

ground when required to travel short distances without ploughing by simply disengaging the cutter drive clutch.

There are no cast-iron parts on the machine, and no complicated parts to get out of order.

The cultivator ploughs any depth required up to 8 inches, and takes a cut a little over 4 feet wide, thus doing one acre every two miles it travels. The depth of cut is controlled by a pilot wheel at the back of the machine on the land side, and is adjusted by a screw, the handle of which can be easily worked from the driver's seat. Messrs. Motor Tractors Ltd., 112-114 Hunter-street, Sydney, are the N.S.W. agents.

A woman had to be inoculated against typhoid. She was unable to keep a dinner appointment she had made for the next day, and sent her daughter, aged eight, to make her excuses.

"And what did you say?" she asked the child on her return. "Exactly as you told me," was the reply. I said: "Mummy can't come because she was intoxicated yesterday and has a bad headache."

### EFFECTS OF THE STRIKE.

Messrs. Geo. Monro Ltd., Covent Garden Markets, London, through their Australian agent, Major Dakin, Goldsbrough House, Sydney, advise: In view of the difficulties we have had to contend with over the general strike, I think you will agree that prices do not show up at all badly. We cleared everything we possibly could from the docks prior to the strike, working right up to the very last minute; but unfortunately it was not possible to completely clear some boats, namely the "Esperance Bay," "Asphalion," and "Osterley." As a consequence some of the fruit left at the docks deteriorated somewhat, and the lower prices which appear on the account sales are for this fruit. Several steamers were held up in dock, and the fruit from them has all come on the market at once, making a certain amount of congestion.

### "SMALL FRUITS OF NEW YORK."

We have received a copy of the 7th of the series of monographs on the fruits of New York. This work, entitled "The Small Fruits of New York," is published by the New York Agricultural Experiment Station, Geneva, N.Y., and is the work of Dr. U. P. Hedrick, horticulturist at the station, and his associates, who have spent years of exhaustive research in compiling the series, including careful trials of the various fruits on the station grounds. The present volume, of 614 pages, beautifully illustrated, is uniform with the rest of the series, and deals especially with Raspberries, Blackberries, Dewberries, currants, Gooseberries and Strawberries, and is a valuable contribution to the literature on the subject. There has been world-wide appreciation of the series which is a monument to the skill of the station workers in general and to Dr. Hedrick in particular.



# Why

be satisfied  
with dwarfs  
and culls

Protect your fruit and rid your orchard and garden of Aphis and similar destructive insects at a cost of only a few cents a tree. "Black Leaf 40," the "Old Reliable" nicotine spray, is recommended by Agricultural Colleges and Experiment Stations. Spray singly or in combination with solutions for scale, codlin moth and other orchard pests.

Sold by leading Australian and  
New Zealand Dealers

Tobacco By-Products and Chemical Corp.  
Incorporated

Louisville, Ky., U. S. A.

**Kills  
Aphis**

# "Black Leaf 40"

40% Nicotine

For Promptness, Reliability  
and Careful Attention

CONSIGN YOUR FRUIT TO

## RULE & BEAVIS

FRUIT EXCHANGE,  
SYDNEY, N.S.W.

A TRIAL SOLICITED.

Shipping Number, 80. Estab. 1888

# Latham Dehydrators

"STAND ALONE"

The "Rolls Royce" of the Artificial Drying  
World.

Particulars, Prices, and list of present  
users on application

## D. J. LATHAM

157 Queen Street,  
Melbourne, Australia

## - LEMONS -

We are the largest Buyers  
in Australasia

C. M. BROOKE & SONS  
73 Whiteman St., South Melbourne, Vic.



## THE PRICKLY PEAR AS A COMMERCIAL PRODUCT.

During the war, Mr. George Adams, of Sydney, made very important discoveries in regard to the commercial use of Prickly Pear, and did a lot of practical work on the subject. Had the war continued longer, these discoveries would have been commercialised, and the ending of the war caused a temporary abandonment to market the products of Prickly Pear.

The researches, however, were continued by him all this time. For the last three years, in collaboration with Dr. L. Clarke Webster, of Sydney, further uses have been discovered, notably the use of Prickly Pear in medicines for various complaints—such as coughs, colds, liver and kidney complaints, and diabetes. It offers a big field for still further research in this direction, and in the direction of some surgical conditions, notably hydatids.

The uses to which Prickly Pear is being put at present, are as follows:—Cordials, fruit syrups, chutney, sauces, honey, conserves, stock fodder, dog biscuits, fancy biscuits, toffee, hand and face lotions, medicines, oil, luncheon foods, and the greatest of all is the manufacture of high-grade papers.

In the making of our syrups and cordials, we utilise the windfalls, inferior grades and over-ripe fruits, which produces a fine product by the Prickly Pear treatment.

Dr. Webster also showed our Sydney manager a process by which fruit for export to any part of the world can be carried in excellent condition, without deteriorating in the slightest. The system is the coating of each fruit at the packing sheds with a very light liquid, which keeps the air intact within the fruit, thus preventing the fruit losing its condition.

## NEW AMERICAN APPLES.

Six new varieties of Apples developed by the fruit specialists at the N.Y. State Agricultural Experiment Station at Geneva are described in a recent publication prepared by Dr. U. P. Hedrick, station horticulturist, in which an account is given of these and other new fruit varieties now available to fruitgrowers. The new Apples have been named Lodi, Medina, Orleans, Milton, Sweet Delicious, and Sweet McIntosh. Each new Apple is distinguished for some characteristic which, in the opinion of the station fruit men, makes it especially worth trying.—"American Nurseryman."

## FRUITGROWERS' POLITICS.

The Editor, "Fruit World,"  
Melbourne.

Sir,—Your journal is much appreciated, and for our mutual interests I will endeavor to induce growers here to support it. It is really astonishing how few men and women realise the great importance politics play in our present everyday life.

The union workers have their Labor Members continually battling in their interests regardless of any other interests. It is of vital importance that the man on the land should take a keen interest in politics: to defend his just rights he must have men in Parliament to do this.

The high tariff and Arbitration Courts have thrown heavy burdens of taxation on to the primary producers' shoulders. The future prosperity of our primary industries depends on export markets.

When the Citrus industry laid their case before the Government, the assistance offered was an insult to our intelligence; let any manufacturer ask the Government for a tariff assistance and he is warmly welcomed and helped with a big duty to establish his trade; primary producers must put men into Parliament to guard their interest and fight for their just rights; so long as he allows others to squeeze him dry, they will continue to do so without compunction.—Yours truly,

W. MCGREGOR.

"Airlie," Shepparton, 22/6/26.

## STRAWBERRIES AND SHRIMPS.

One of the delegates at the recent Convention of Victorian fruitgrowers at Portland, has solved the problem of getting two different crops off the same plot of land at the one time. When in England, he had a fine bed of Strawberries, but one day discovered that the plants were being seriously attacked by slugs. He was told that salt would destroy the slugs, but not having sufficient salt, he decided to try the next best thing. He brought up a load of fresh seaweed from the shore and spread it thickly around the plants. When he went to gather the Strawberries, he said, and lifted the seaweed, there were no slugs, but he could take his choice whether he had Strawberries or shrimps for tea!

English Guide (showing places of interest): "It was in this very room, sir, that Wellington received his first commission."

American Tourist: "That's so! How much did he get?"

## New Zealand is an Important Market for Australian Fruit.

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All consignments for this market will have careful attention and realize highest prices if sent to

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**TASMANIAN ORCHARDISTS' AND  
PRODUCERS' CO-OP. ASSO-  
CIATION LTD.**

**A Progressive Company.**

The Manager of the Tasmanian Orchardists' and Producers' Co-operative Association Ltd. (Mr. C. H. Cane), has kindly supplied the following information, which will be of interest to our readers:—

Although this Association has been in existence many years, it actually commenced business to an extent in 1920, for which year, ending June 30, it supplied to its clients goods to the value of £8,000. Since that date it has increased its turnover in actual supplies to members from £13,000 in 1921-22, to £55,000 in 1925-26.

In addition to this, the export quantity of fruit to overseas markets

was increased as follows:—1921, 12,000 cases; 1922, 45,000 cases; 1923, 127,000 cases; 1924, 98,000 cases; 1925, 150,000 cases; 1926, 240,000 cases from Hobart, 80,000 cases from Beauty Point.

Lately the company established a branch office at Launceston, where the business rapidly increased, and in addition, agencies have been established in all the chief fruitgrowing districts in Tasmania. The company states that it pursues its course solely in the interests of the grower, and refuses to take sides in any political question.

The actual paid-up capital of the Tasmanian Orchardists' and Producers' Co-operative Co., is under £2,000, and for the year 1926 their turnover exceeded £55,000 in goods supplied alone. They also own their own premises, which are valued over £8,000, and in addition carry large stocks;

thus a sound financial position has been arrived at.

It is to be understood, of course, that the company has to carry a large reserve to protect itself, owing to rapid fluctuations which occur in the fruit industry.

"We might mention," states Mr. Cane, in conclusion, "that the actual amount of money handled by us during the 12 months ending June 30, 1926 (this includes fruit and goods on consignment through our Association) was in the vicinity of £500,000, i.e., £250,000 goods (including goods on consignment sold by us), and of course we had the rehandling of the money, which makes £500,000 on a 2,000 capital."

Poulterer: "Was that a good chicken I sold you last Saturday?"

Customer: "I don't know. We could not get our teeth far enough into it to catch the flavour!"

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## Special Notice to Fruitgrowers

In response to numerous requests from growers for information as to who are members of the **WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA**, the following list is given. All are members of the above Association, and are registered firms:—

H. M. Wade & Co., 471 Flinders Lane, Melb.  
 T. Stott & Sons, 11 Western Market, Melb.  
 F. Booth & Sons, 15 Western Market, Melb.  
 H. L. E. Lovett & Co., 410 Flinders Lane, Melbourne.  
 A. E. Pitt, 12 Western Market, Melbourne.  
 J. Davis, 13 Western Market, Melbourne.  
 G. Woolf & Sons, 3 Western Market, Melb.  
 W. S. Tong, 4 Western Market, Melbourne.  
 Silk Bros., 441 Flinders Lane, Melbourne.  
 J. G. Mumford, 449 Flinders Lane, Melb.

J. W. Ross, 6 Western Market, Melbourne.  
 W. Sweeney, 14 Western Market, Melb.  
 J. H. Young & Co. Pty. Ltd., 7 Western Market, Melbourne.  
 D. Smith Pty. Ltd., 480 Flinders Lane, Melb.  
 Silbert, Sharp & Davies Pty. Ltd., 17 Western Market, Melbourne.  
 A. Millis & Sons Pty. Ltd., 5 Western Market, Melbourne.  
 W. A. Watkins, 62 King Street, Melbourne.  
 P. A. Patrikeos, 31 William Street, Melb.

**GROWERS PROTECT YOURSELVES** by consigning to members of the **WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA**.

Correspondence is invited by the Association.

J. D. FRASER, Secretary, 325 Collins Street, Melbourne.

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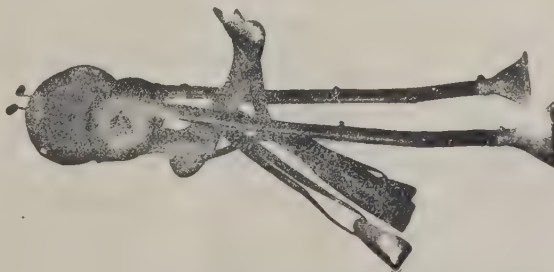
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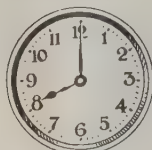
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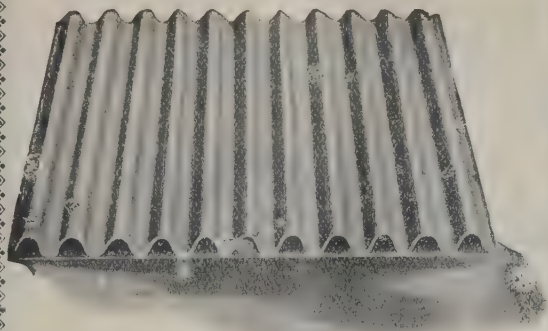
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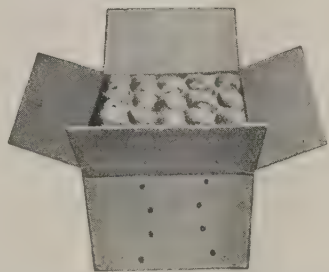
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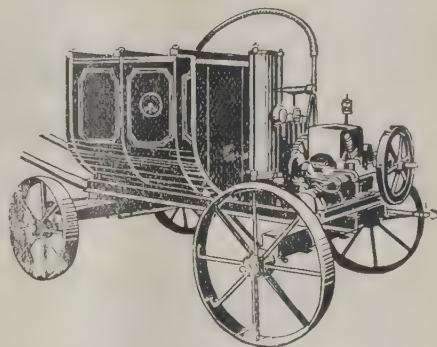
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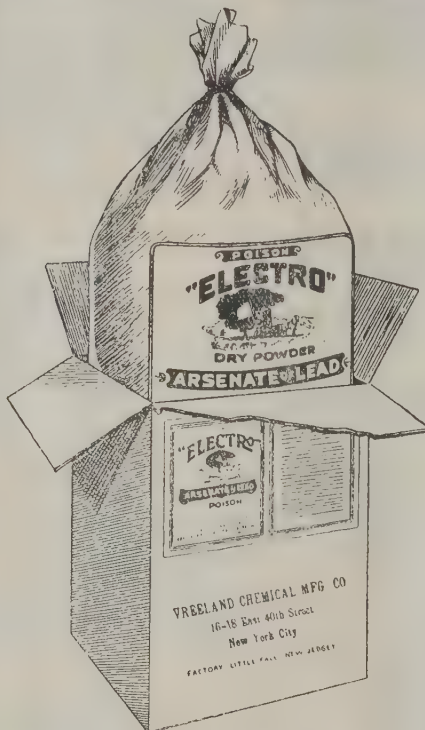
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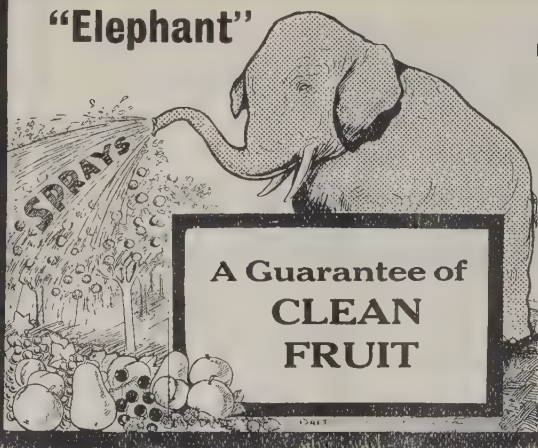
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**"FRUIT WORLD OF AUSTRALASIA."**

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of each Month.

**Editorial and Management Notices.**

**Articles and Photographs.**—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printer's MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked "Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

**Subscriptions.**

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**Advertisements.**

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States, as set out below.

Changes of copy for advertisements must be in our hands on or before the 17th of the month prior to publication.

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E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director: HON. L. M. SHOOBRIDGE, M.L.C.

**NOTES IN BRIEF.**

The English Apple crop in the present season is from light to medium.

Owing to the heavy duty on Australasian Grapes, German fruit handlers advise that no further shipments of this fruit be sent at present.

The trade treaty between U.S.A. and Germany, gives the former country an advantage in duty of 1/6 per bushel over Australasian Apples.

The prospects for Australian fruit in Germany in 1927 are deemed to be very favorable.

"Combined action by all growers against codlin moth, combined with thoroughness of application and correct use of sprays, would materially reduce losses." So stated Mr. J. H. Lang at the recent Fruitgrowers' Convention at Portland.

"Losses in U.S.A. through insect infestation amount to £500,000,000 annually."

It is urged that life history studies in regard to codlin moth should be undertaken in every fruitgrowing country. "It is very important that each season's variations be marked out definitely and not guessed at."

**REDUCE FRUIT VARIETIES!**

That is What U.S.A. and Canada are Doing.

**Odd Varieties are Worthless.**

"Many factors have contributed continually to decrease the number of varieties for commercial planting," states Mr. R. W. Rees, in "Apple Survey of the United States and Canada. With years of experience growers have a real knowledge of the real market quality and market demands for given varieties, as well as a knowledge of the bearing habits and vigor of the trees. Experience has taught the general range in which the various varieties can be produced successfully."

\* \* \*

"Many growers are finding it more profitable to cut out old orchards of odd varieties and to plant new ones of standard varieties."

\* \* \*

The loss due to many odd varieties frequently is underestimated. Odd varieties occupy land which otherwise might be profitable. There is a greater cost of harvesting, packing and marketing many small lots than in handling the same volume of a standard variety."

**MELBOURNE ROYAL SHOW.**

The Royal Agricultural Society of Victoria held its Annual Show at Flemington, Melbourne, from September 16th to 25th, and it was highly successful. The exhibits of live stock, fruit, machinery, etc., were uniformly good.

Citrus fruit was temptingly displayed from many centres. In the Apple and Pear section the cold stored fruit showed to advantage. Diamond Creek won the Cool Stores Association Challenge Shield. Towards the end of the 9-days' Show, however, it was noted that fruit had a thick coating of dust, many varieties being unrecognisable. The fruit display by the Agricultural Department, while not on the same scale as the previous year, was tastefully arranged.

**THRIPS IN VICTORIA.**

The warm dry weather in early spring has been responsible for a heavy infestation of thrips in Victorian orchard centres. Considerable damage was done before the general rainfall on September 27th. The Government Entomologist (Mr. C. French, Jr.) recommends the following sprays to assist in the fight against thrips:—

Commercial lime-sulphur (33 deg. Baume), 5½ gallons; black-leaf 40, 14 fluid ounces; water, 200 gallons. The addition of one part of black leaf 40 to the 2,000 parts of an oil emulsion, or a miscible oil spray, will also give good results. To any spray a spreader, composed of four gallons of flour paste (1lb. flour to each gallon of water, dissolved to make a paste) to every 100 gallons, will greatly aid, and give much better results than if used alone.

**FRESH FRUIT EXPORT CONTROL.****Victoria Votes "No."**

In order to obtain an expression from Victorian fruitgrowers on the subject of the proposed Fresh Fruit Export Control Bill, a preliminary vote of Victorian growers has been taken.

The case for control was that submitted by Mr. J. W. Bailey at a growers' meeting. This, together with a reply by the Victorian Exporters' Handling Committee, and a voting paper was sent broadcast to growers by the Exporters' Committee.

The progress figures in the voting are:—

|                           |     |
|---------------------------|-----|
| For control . . . . .     | 52  |
| Against control . . . . . | 566 |

# Research Into Fruitgrowers Problems

## Practical Assistance from New Science Council

Federal Government has Granted £250,000 for Investigating Primary Producers' Problems.

Cold Storage and Transport. Citrus and Vine Problems in Irrigation Areas. Insect and Fungoid Pests to be Studied.

Cambridge Scientists are Coming to Australia.

**P**ROBABLY the most encouraging news for the fruit industry in recent years, was contained in the address by Professor A. C. D. Rivett, M.A., D.Sc., a member of the Executive of the Commonwealth Council for Scientific and Industrial Research, before the Victorian Fruit Council, on September 23.

After being cordially welcomed by the President (Mr. J. H. Lang), Professor Rivett stated that the Council for Scientific and Industrial Research had superseded the Institute of Science and Industry, which had been operating, with limitations, since 1916. "The Council meets twice a year, but the Executive meets regularly to deal with matters as they arise. The Chairman is Mr. Julius, of Sydney. We want to know your difficulties, and to set about helping you."

Professor Rivett stated that of the Commonwealth grant of £250,000 for scientific research, a considerable sum had been set apart for studying fruit problems, particularly (1) cold storage and transport; (2) irrigation problems (viticulture and citriculture, soils, manures, seepage, etc.); and (3) insect pests and fungoid diseases. In addition, £100,000 in bonds had been invested, the annual income of £5,250 from which would be used for the training of Australian graduates for research work. One of the problems at present was to find suitable men who could be so trained. Until recently there had been no opening for men desirous of pursuing such a calling. Professor Rivett explained that they had to start from bedrock to train the men. The Science Council had just arranged for two young men of promise, Messrs. Garthside and Holdaway, to go to the Cornell University (U.S.A.), to train under a world-famous entomologist. In no section of research work was there such a regrettable shortage of trained scientific workers as in entomology.

### Cold Storage.

In this regard the Science Council was in co-operation with the Depart-

ment of Scientific and Industrial Research in England, particularly with its cold storage Research Station at Cambridge. Two delegations of Cambridge scientists had visited Australia, and their decisions had been of immense value to the industries concerned. Apart from the matter of transport in the ships' holds, there were many other factors to be taken into consideration, such as the best time to pick the fruit.

It was recognised that the work of investigation must be commenced right in the orchard—i.e., orchard practices right through to placing the fruit on board ship, and as to whether pre-cooling was necessary or not. All the work would need to be done systematically.

The Science Council had written to Sir Frank Heath, asking that the services of a highly-trained officer might be made available. Arrangements were being completed to enable Dr. Kidd, second in command of the Cambridge Research Station, to be made available. It was hoped that Dr. Kidd could arrive here next February, to act as adviser in the study of many of the fruit storage and transport problems. The work already done by Dr. Kidd was known to Australians and highly appreciated.

Dr. Kidd would probably stay in Australia one year. Another scientist coming out, who was also favorably known in Australia, was Mr. A. J. Smith, M.A., who would investigate the conditions under which fruit was exported in ships' holds, with special regard to temperatures. His agreement would be for at least five years.

Some people wondered how it was that fruit which kept well in cold stores in Australia, deteriorated in the ships' chambers on the way to the United Kingdom. The fact was that the temperatures varied from 15 to 25 degrees in the holds. Meat cold storage and transport were also being investigated.

### Irrigation.

Irrigation problems were being studied, especially with regard to viticulture and citriculture. Irrigation

was essentially a Federal matter: it vitally affected the fortunes of at least three States—New South Wales, South Australia and Victoria. Recently, Professor R. D. Watt, of New South Wales, Mr. J. A. Prescott, of the Peter Waite Institute, South Australia, and Mr. Laing, of the Victorian Water Commission, had toured the irrigation districts and presented a valuable report, which in many respects was startling. The report showed that growers adopted methods differing widely in fundamental principles. Work on the soils and the study of the seepage problems would also be undertaken.

The Council intended to co-ordinate the research activities of the various States. Good work was being done at the experiment stations at Merbein (Vic.), with Mr. A. V. Lyon in charge, at Griffith (N.S.W.), under Mr. West, and by the various State Departments of Agriculture.

### Pests and Diseases.

With regard to insect pests, Mr. Gerald Hill, a noted entomologist, had been appointed, and his principal work for the present would be to investigate the underground grass grub in Tasmania, and discover methods of combating that pest; and the Pea mite, which was working havoc in Australia.

Research was to be proceeded with in regard to the dried fruit moth (*Plodia interpunctella*), which annually caused very severe losses to stocks of dried fruits. Quite possibly it might be necessary to send a man to Smyrna to investigate the problem there.

The Science Council was also studying problems in animal life, live stock, field and forest products. Primary industries were to receive first attention though it was known many problems in secondary industries were awaiting solution.

Following Professor Rivett's remarks a general discussion took place regarding orchard problems which needed urgent attention (these will be referred to in our next issue). A cordial vote of thanks was tendered to Prof. Rivett.



# Proposed Fresh Fruit Export Control

## Points For and Against

Growers insist on Safeguarding the F.O.B. Trade.

Can a Dissident State Vote itself out of the Proposed Control?

HERE is one very live topic in Australian fruitgrowing circles to-day, and that is the proposed Bill for the control of fresh fruit export.

Two diametrically opposite views

are held—one section favoring the control system, the other as strenuously opposing the control proposals.

We set out hereunder a resume of the arguments which have been freely expressed, both for and against the

proposed control. These are based mainly on the circular in favor of the proposals submitted to Victorian growers and the replies by the Victorian Fruit Exporters' Handling Committee.

### In Favor of Control.

1. The Export Control Board would control the overseas marketing, particularly in the United Kingdom and the Continent, of fresh Apples and Pears in co-operation with its London Agency. The duty of the London Agency would be to improve the marketing of the fruit, to open up fresh markets, to supervise the sales, and bring about co-ordination amongst selling agents. The London Agency would confer with distributors and advise them of the prices which they consider should be obtained, and generally to endeavor to stabilise prices.

2. The London Board would report on the necessity or otherwise of limiting the number of distributors in the United Kingdom: undertake propaganda and advertising, and keep the Australian Board advised as to current prices, quality, grading, and condition of each shipment.

The London Agency could report re any unsatisfactory selling agent, and prevent further supplies going to such agent.

3. The Board may approach shipping companies to have self-registering thermometers installed, and instruments to detect the presence of carbon dioxide.

4. Negotiations could be opened up—(a) for special concessions re insurance, and the Board could be empowered under the Act to make contracts with insurance companies; (b) for the payment of freight at the port of destination instead of at the port of despatch.

5. Early shipments could be regulated so as to eliminate immature fruit: unsuitable varieties could also be eliminated.

6. In order to regulate supplies, the Board could ascertain from each port the quantities which could be absorbed at payable prices, and take action accordingly to regulate shipments from this end.

In the event of arrivals clashing at any one port, the London Agency could make arrangements to withhold such subsequent supplies as may be deemed necessary to hold prices, or divert portion or the whole of any cargo.

7. The Board could limit the quantity of fruit shipped by any one vessel to any one port, and limit the number of ports to which fruit in any one vessel is consigned.

### Objections to Control.

1. The organisation for marketing fresh fruit in the United Kingdom is in the hands of old established and reputable firms: interference with a highly perishable product is dangerous. Salesmen are at work throughout Europe to extend sales. The London Agency could not supervise sales which take place every day in different ports in Great Britain and on the Continent. Salesmen, if only in self interest, try to secure best prices, the only way to stabilise prices, is to limit shipments, thus glutting Australian markets, and giving America greater power in United Kingdom. Take away the right of a buyer to handle the fruit purchased F.O.B., and the buyer disappears.

2. To reduce the number of distributors or deny them supplies would mean forcing them to obtain supplies from America or elsewhere. Fruit advertising is already being carried out on a huge scale by skilled publicity experts, growers and salesmen contributing to the cost.

Newspapers and private cables now keep growers fully advised as to prices. By the time the first shipments are sold the shipping season is drawing to a close: reports on grading, packing, etc., are furnished by salesmen.

Growers, after 30 years' experience, know the firms with whom they deal. Reports on any agent can be obtained through a bank.

3. The shipping companies are not averse to installing self-registering thermometers when these have proved reliable. They already use instruments to detect carbon dioxide. The shipping companies, at their own expense, arranged for the Cambridge scientists to travel on their steamers, giving them a free hand to investigate every aspect of fruit transport.

4. Insurance premiums have already been reduced. Experience proves that the cutting of rates may lead to a more restricted type of policy.

Negotiations for payment of freight at destination are proceeding. Butter and other perishable freight is prepaid. Reductions of freight have been secured: a further reduction to 3/- was recently requested, but this was met half-way by a reduction to 3/6 per case.

5. Some buyers in England insist on the earliest possible shipments. It would be a mistake to refuse the trade. Under the Commerce Act regulations, immature fruit and unsuitable varieties could be rejected.

6. It is impossible to ascertain beforehand the quantity any port could absorb. Fruit supplies come from other parts of the world, and the weather is always a factor.

The regulation of supplies is already reasonably covered in that firms which buy, and those which receive fruit on consignment generally limit the quantity to be shipped on any one boat. To hold supplies means extra storage and handling costs. Steamers could not be diverted because of their time-table. To give the Board power to divert cargoes means cancelling all the security in the Bill of Lading, and shippers could not operate.

7. Any attempt to limit the number of ports at which a vessel would discharge would mean reduction of channels of first hand distribution.

8. Growers could obtain advances under the Export Guarantee Act on any fruit placed entirely under the control of the Board—up to 80 per cent. of the market value of the fruit as fixed by the Minister. Advances may also be obtained under the Commonwealth Bank (Rural Credits) Act. In this case the Bank would fix the margin.

9. The Draft Bill provides for a board of seven, consisting of a member with commercial experience (Government nominee), three members from Tasmania, one each from Victoria and W.A., and one to represent N.S.W. and S. Australia.

"The Board shall be a body corporate, with perpetual succession. . . ."

The export of fruit is prohibited except in accordance with a licence specifying certain terms and conditions.

In conclusion, the Victorian Export Handling Committee submits that the Control Bill seeks to attain the unattainable. If market prices are interfered with by a Board, sales will fall off, accumulations of fruit will result, cool storage charges will be incurred, and in the end the grower will be worse off. The things that are possible are already being done, or can be done, without a Control Board. If a levy be desired it could be obtained without a Control Act, as with the wine and meat industries. A semi-Government Board, slow-moving,

with irksome regulations, is not expected to improve the trade. A surer method would be for the growers' associations to co-operate with the Exporters' Handling Committee, which already has highly-organised transport and selling arrangements.

A circular, issued in reply to the foregoing, sets forth that, although mainly reputable firms handled the trade in England, there was no co-ordination between them and a weak holder could break the market. The continental market was not being supplied to best advantage. The Lon-

8. Advances are already made by the agents, long before the shipping season starts, by way of supplies of cases, etc., free of interest. Under the Export Guarantee Act or the Rural Credits Act, no advances would be available until the fruit was in cool store, or on board the steamer, and interest would be charged. Growers are asked to note the suggested methods of fixing values.

9. The representation from Tasmania is too great, as it could easily mean domination by that State.

No provision is made for the inclusion of a representative of the F.O.B. buyers (as is done in the Butter Export Control Act). There is no time limit in the event of the Act not proving so successful as is hoped.

No provision is made for the exclusion of a State or district (as in the N.Z. Act), which does not desire to come in under the control scheme.

don agency could report on this. To supervise sales the London agency would co-operate with the trade, regular meetings of the agents could be held, and the matters of policy and minimum prices could be decided upon. While not intended to limit the distributors, the idea was to reduce the number of first-hand sellers from whom the distributors purchase.

Under control, the advertising could be greatly enlarged. By collective bargaining better insurance terms could be obtained.

## FRUIT EXPORT CONTROL.

### Vigorous Opposition in Victoria.

#### Meeting Ends in Confusion.

IF the attitude of the large meeting of growers held at the C.T.A. Board Room, Melbourne, on September 22, be accepted as a guide, Victoria does not desire a Fresh Fruit Export Control Board. The meeting was called by the Apple and Pear Growers' Association of Victoria. In addition to growers from the principal exporting centres, representatives of the agents and f.o.b. buyers were also in attendance.

In opening the proceedings, the President (Mr. J. H. Lang) said that reports from New Zealand regarding the Control Board were generally favorable. South Africa was also operating under a Control Board. The Executive had been charged with undue haste in seeking the legislation, but haste had been necessary if the Bill were to be brought into operation for the coming season. The Bill provided opportunity for the grower to take a greater control over the export than was possible otherwise, and the time had come for more co-operative effort along these lines.

Mr. J. W. Bailey (Narre Warren) outlined the purposes of the Bill and the benefits to be gained by the establishment of control. This would

stabilise the Apple industry of Australia, which was larger than the interests of any particular State. It was proposed that the Board, when elected, would include three members elected by growers in Tasmania, one each by growers in Victoria and Western Australia, and one representative for South Australia and New South Wales, together with a member with commercial experience. The Executive was in favor of f.o.b. sales, and there was no intention of interfering with them. One penny per case levy would produce £10,000; he advocated a levy of 2d. to provide £20,000 to allow for advertising and propaganda. The Australian Board would set up a London agency which would co-ordinate the existing agencies overseas, which did not now act in co-operation; investigate the quantities which each port could consume, and notify Australia some months ahead in order that arrangements could be made for the right quantities of fruit to be supplied to the several markets.

Mr. J. Scouller, a grower member of the Dried Fruits Board, stated he did not know the difficulties in marketing fresh fruit, but would give the experiences of the Dried Fruits Board, hoping they would prove serviceable. Mr. Scouller traced the activities of the dried fruits industry from the grower to the consumer in the United Kingdom, and said the

Board had done most useful work, and that 95 per cent. of the growers would vote for its continuance. The Board had prevented panics and hasty selling, and by holding had secured even prices throughout the year. Freight reduction and better insurance arrangements had been secured. The London agency acted in close co-operation with the London brokers and agents.

After several questions had been answered, Mr. Scouller was warmly thanked for his attendance.

Mr. H. Osborne, of the Dairy Control Board, said that although 80 per cent. of the butter in Australia was controlled by co-operative organisations, the Export Control Board had been welcomed, and had proved effective. Freight had been reduced, and better insurance conditions obtained; prices had been stabilised; better selling arrangements were made in London, and a big advertising scheme in conjunction with the dried fruit and canned fruit interests was being conducted. The London Board met every week. Fruitgrowers should not be afraid of the bogey of control, but should trust the men they elected, knowing that such would not hurriedly upset the established channels of trade. In other words, the Bill was not so much to control as to organise and supervise, enabling the growers to do their work collectively, not individually.



Mr. W. C. Wilson (Dairy Control Board), supported Mr. Osborne, stating that his Board believed in the consignment trade, and did not like f.o.b. sales, and hoped that such would soon be eliminated.

In reply to Mr. J. F. Moody (Pakenham), Mr. Osborne stated that the export of butter from Australia amounted to 48,000 tons last season, the value £8,000,000. By a levy of 1-16th of a penny per lb. on butter, and 1-32nd of a penny per lb. on cheese, the revenue of the Board was £26,000; the administrative expenses were £10,000, and £10,000 had been set aside for advertising.

Several questions were asked and answered, and Messrs. Osborne and Wilson were accorded a hearty vote of thanks.

Mr. F. Thomas (Bunyip) said organisation and control were necessary. Agents were doing useful work, and their co-operation and not their opposition was needed. The Executive had organised opposition against it, and the agents had done their best to defeat the proposed Bill. He complained of the prejudiced attitude of the two leading Melbourne dailies. Nothing would be done to hamper f.o.b. sales, but the Board must have power to divert shipments if necessary, though this could not be done without the consent of the people concerned. He moved "That this representative meeting of Apple and Pear growers approves of the creation of an organisation to improve the conditions of our export trade."

Mr. W. H. Carne (Pakenham Upper) seconded.

Dr. Soilleux (Wantirna) vigorously criticised the control proposals, and urged growers not to put a rope round their own necks. It was outrageous to provide for three Tasmanian representatives on the Board. These could easily dominate the position. He disagreed with the policy of running to the Government. He moved that the proposals were undesirable in the interests of fruit-growers in Victoria.

Mr. A. E. Thiele seconded the amendment.

The Chairman ruled this out of order as a direct negative.

Mr. C. H. Jost (Quantong) said he represented 47 growers. They had had enough of Boards, both State and Federal, and wanted freedom to sell their fruit as in the past. He sold 100 per cent. of his fruit f.o.b. He could not express in polite language his opinion of the proposed Bill.

A voice: Tell us in your own words.

Mr. Jost: —, —, — . . — !! (Loud laughter.)

Mr. A. E. Thiele (Doncaster) said he believed that he was the largest exporter of Pears in the Commonwealth. The export business was on a satisfactory basis; sound fruit always brought good prices. The Control Board would have authority over the shipping space, and with the Tasmanian preponderance, the best Pear boats would be lost for Victoria. Unless the growers could get selected boats, it was useless to send Pears. There was no secret in successful Pear export, and he would give the necessary information desired to any persons interested. The proposed limitation of London agents would mean that those eliminated would handle American fruit to the detriment of Australia. It was in Australia that "control" was needed—better conditions in the district in which the fruit was grown. (Hear, hear.)

At this stage there was much interruption and confusion. Mr. Fuller (Pakenham) challenged Mr. Bailey; the latter had said the Bill was dead, and here it was being brought forward.

Mr. Brown (Pakenham) said the buyers had stabilised their district, and he objected to any interference with f.o.b. trade.

Mr. Ely (Harcourt) moved that the matter be referred back to the fruit-growers' associations. In his association there were 80 growers, and he asked on what basis the voting would be taken. He disagreed with the doleful picture of the export trade, as stated by Mr. Thomas.

Mr. L. Cole (Tyabb) seconded. His association had never had the Bill officially before them; 90 per cent. of the growers were not aware of the proposals contained in the Bill.

Mr. F. W. Vear (Healesville) said the powers under the Bill were too drastic. There was a world of difference between the butter and dried fruits industries as compared with fresh fruit. The butter representative spoke of the limitation of consignments from Australia. This was impossible with fresh fruit, which was affected by seasonal conditions. Under present circumstances the grower had the choice of export, local sales, or storage. With fruit not colored sufficiently for interstate trade, and which, in the grower's opinion would hold up for the export period but would not store for any great length of time, buyers would operate at payable prices, thus clearing the market. But if the Board of Control, with its power of limiting exports, were to say this fruit should

not go forward for export, it would be a loss to the grower. From the remarks of their visitors it would seem that the butter and dried fruits controls were still in their experimental stages, and they had much to learn. Mr. Scouler had said that once the provisions were in the Act, it was extremely difficult, if not impossible, to alter them. Thus, with no redress under a possibly faulty Act, the position was too serious for him to accept the control proposals.

Mr. Moody said the Act might be all right with certain safety clauses which his district had proposed.

Mr. Ramage (Pakenham) said that their meeting had been told the Bill was dead, and the local chairman would not give them permission to discuss it.

Mr. Mentiplay strongly criticised the proposed Bill.

Mr. A. E. Thiele gave notice of an amendment: "That this meeting protests against the Control Bill." The Chairman said he could not accept that amendment.

Mr. Ely's amendment was then put and declared carried by 29 votes to 16.

Mr. Thiele again sought permission to move his amendment, but the Chairman ruled it out of order. Several growers rose, speaking together, and protested against the Chairman's ruling. There was considerable confusion and uproar.

The Chairman, shouting to make his voice heard, said a letter had been received from the Minister for Markets and Migration (Mr. Paterson), inviting two delegates to attend an Australian conference on October 14, and asked if the meeting desired to appoint delegates. Members shouted they would not appoint delegates, and again there was confusion. At last the Chairman stated, amid uproar, that it would be an insult not to fulfil the Minister's wishes, and if the meeting did not appoint delegates, the Executive of the Apple and Pear Growers' Association would do so. The following were then nominated:—Messrs. Jost, Bailey, Dr. Soilleux, Williamson, Lang, Vear. On a poll being taken, Dr. Soilleux and Mr. Lang were declared elected.

#### APPRECIATION FROM NYAH.

(To the Manager, "Fruit World.")

Sir,—Herewith is two years' subscription to the "Fruit World." I like getting your book, there is a lot of valuable information to orchardists in it.—C. Connor, Nyah West, 9/8/26.

# PRODUCE BETTER FRUIT

## Seasonable Hints for Controlling Orchard Pests

(By J. M. Ward, Superintendent of Horticulture, Victoria.)

**F**RUITGROWERS! Keep your fruit trees free from pests, then better and more fruit will be produced.

This is easy to say, but not always simple to put into effect. The commercial orchardist, however, readily understands that if he is to produce fruit that will enable him to show a profit on his capital outlay and working expenses, he must produce fruit that is, at least, reasonably free from disease.

Among our commercial fruitgrowers, we have some particularly keen men who thoroughly understand the business or profession of producing good fruit; on the other hand, there is always the careless man who should never have been a professional grower of fruits. Such a grower is really a menace to the better class horticulturist, for he somewhat—not altogether, though—neglects to effectively control the diseases affecting his trees, and thus these trees become a breeding ground to provide a supply of insect pests and other diseases for his careful neighbour. Worse than this is the man who has a dozen or so fruit trees to supply household requirements.

Usually ten or twelve fruit trees are too many for the householder to manage; particularly if his spare time is taken up with bowling, tennis, racing, or some other hobby; or, again, the average farmer may have from a quarter to half an acre of fruit trees, and when any part of the farm becomes neglected the fruit trees suffer first, then insect pests and fungoid diseases become very conspicuous.

It is for the careless man that Acts of Parliament and Regulations are made and enforced. Were these not made and enforced, our fruit trees would be affected with disease to a much greater extent than is the case at the present.

### Native and Introduced Pests.

Whilst the insect pest native to Australia is more or less troublesome, usually it is not as serious as the imported one, for the simple reason that every insect has its natural enemy to keep it somewhat in check. The Australian insect pest has its parasite here, whereas the imported pest is, more often than not, brought here minus its natural enemy.

The **Apple beetle borer** (*Leptops hopei*), as is well known, is a curse to Apple growers in certain districts in Victoria, but were it not for a parasite (*Perilitus leptopsi*) that preys upon the beetle borer, and to some extent keeps it in control, this pest would be even more destructive than it is now. A few native insects that have become injurious to fruit trees are the **Painted Apple moth**, **Light Brown Apple Moth**, **Apple Root Borer**, and the **Rutherglen Bug**.

Space does not allow one to deal with control measures for both insect pests and fungoid diseases in this article, and as the season for combating the latter is now with us, the writer will now confine himself to fungi.

### In combating fungoid diseases

of fruit trees, growers should fully understand that these diseases are practically always with us, and it only requires the right weather conditions to cause the spores to germinate, and the disease will show up to a very considerable extent. Dry conditions are unfavourable for the development of fungi.

In spraying against fungus diseases, it must be borne in mind that the treatment should always be essentially preventive, rather than combative; for once these organ-

isms have entered their host plant, they are beyond the reach of effective treatment. The aim of the horticulturist should be to coat, with a fungicidal spray, the tree to be protected, so that when the spore of the disease germinates, its mycelium or root would first come into contact with the applied fungicide that separates it from its host plant, thus preventing the mycelial threads from entering one of the stoma or breathing pores of the tree to be protected. If these spores settle on an unsprayed tree, they rapidly enter their host (the tree or fruit, as the case may be) and feed on its tissues, killing the parts attacked; and it is the inability of these dead parts to expand, and thus keep pace with the growing parts of the fruit that causes the cracks in Apples and Pears when these are attacked by **Black Spot**.

### Crop Insurance.

Whilst the winter months have not been very wet ones, in all probability a wet spring or summer may be experienced. Should this happen, **Black Spot** of the Apple and Pear, **Brown Rot** of Stone Fruits, and **Apricot Shot-hole** will be very much in evidence. Fruitgrowers would, therefore, be acting very wisely in taking precautions to protect their crop, by adopting remedial measures, and thus bringing about more production in each individual orchard, and greater profit to the owner.

A grower should look upon control measures against disease in his crop, from the same aspect as the owner of a home who has his house and furniture insured against fire. In this instance, I would particularly appeal to my fruitgrowing friends in the Goulburn Valley to adopt control measures for **Apricot Shot-hole** and **Brown-rot**. Canneries will not accept Apricots affected with **Shot-hole fungus**, whilst **Brown-rot** destroys the fruit before it leaves the orchard.

### Important factors

to be observed in spraying are the use of the right materials, proper mixing, correct period of applying, and thoroughness of application. Such work as cultivation and pruning can usually be postponed without causing injurious effects to the tree or fruit, but the application of spraying for disease control cannot effectively be put off until to-morrow. If the best results are to be obtained from spraying, this work must be accomplished at the psychological moment, and the only thing that should be allowed to interfere with spraying is the weather—over this man has no control.

As to the actual time for the various sprays to be applied, one cannot give exact dates. In this respect, each grower must exercise his own judgment, coupled with experience and close observation; for you will readily understand that I can only generalise in dates or periods in this short article, and you will also realise that districts and localities greatly vary. Later on, I shall state the periods for spraying, and leave the dates to judgment of readers.

I am now going to touch upon those diseases most common to growers.

### Black Spot of Apples and Pears.

Apple and Pear growers of Victoria and Tasmania, owing to climatic conditions, have more trouble with this disease, than growers in other States. Some seasons are, of course, worse than others. From experiments carried out at various times in Victoria, during the past few years—more particularly in Gippsland—everything



points to orchardists being able to control Black Spot, by thoroughly spraying the trees with Lime-Sulphur, at the strength of one gallon of Lime-Sulphur to 15 gallons of water, when from 70 to 80 per cent. of the blossoms are fully out, followed by a second application, at the 1-30 strength, just after the petals have fallen. Before growers in districts other than Gippsland use Lime-Sulphur at the strengths and periods mentioned, on the whole of the orchard, they are advised to first experiment on one tree, for burning may occur.

Experience in some parts of Victoria and Tasmania go to show that excellent results are obtained by spraying with Bordeaux Mixture at 6-4-40 (6 lbs. copper sulphate, 4 lbs. fresh lime, 40 gallons of water), applied at what is known as the "delayed dormant" period, i.e., just as the buds are bursting, followed with a further application, at 4.4-40 during the "pink" stage—after the buds have opened up, but just prior to the petals opening out. Both the above control measures are highly recommended.

The use of Bordeaux Mixture is not recommended after the fruit has set, for whilst it is quite effective in controlling Black Spot, the mixture causes a considerable amount of russetting, which, to some extent, lessens the market value.

Even when Bordeaux is used at the pink stage, a little russetting will occur. Spraying the Apple tree for Black Spot during the dormant season is a waste of time and material, for the spores of the disease are not known to winter on the Apple tree; therefore applications at this period have very little effect upon the spores, but, as the warmer weather approaches, the spores arise from the dead foliage and attack the fruit at the stem end of the blossom clusters; whereas the spores of the Black Spot of the Pear (*Venturia prinia*) are known to winter on the trees, and dormant spraying certainly is effective. At the same time, there is usually no necessity to especially apply a winter spray to Pear trees to check the Spot. If spraying is carried out as outlined, excellent results can be obtained.

#### Brown Rot.

This fungus disease is more or less disastrous once it makes its appearance in a stone fruit orchard during a humid season. All diseased fruit and wood should be carefully gathered and burnt—not buried. If allowed to remain in or on the ground beneath the tree they become a breeding ground. Trees attacked by Brown-rot should receive a thorough spraying of Lime-Sulphur at 1-9 strength, just before the buds burst, this should be followed up with another application after the fruit sets,

with the same mixture at 1-30. Bordeaux Mixture at 6-4-40 for the first spray may be used instead of Lime-Sulphur, if the grower so desires.

#### Leaf Curl of the Peach and Apricot Shot-Hole.

These diseases can be controlled by spraying the trees in a similar manner as advised for Brown-rot; although, for Shot Hole, splendid results have been obtained by applying an autumn spray of 6-4-40 Bordeaux.

#### Downy Mildew of the Vine (*Plasmopara viticola*).

Vines attacked by this disease should be sprayed with Bordeaux Mixture at the 10-5-50 formula. Winter spraying for Downy Mildew is useless; the vines should be sprayed with the mixture already mentioned, during the latter part of October or November, and again in January or February if weather conditions demand it.

#### Vine Black Spot (*Maginia ampelina*).

This fungus causes much damage in a wet Spring, especially to Sultanas. Control is twofold, and consists of (a) swabbing of the dormant vines in August, shortly before they sprout, with iron acid solution (iron sulphate 20 lbs., sulphuric acid 8 lbs., water 10 gallons); (b) spraying the growing vines with Bordeaux Mixture (10-5-50). Black Spot does not need high temperatures for its development. Early and repeated spraying is therefore necessary, in a wet Spring especially, if swabbing has not been properly carried out.

#### Armillaria mellea,

commonly known as Root-rot fungus, is a root killing fungus, very destructive to fruit trees in certain soils, such as the red soil, and grey sandy loams.

While mentioning this disease, I desire to include another root-rot fungus (*Hypholoma fasciculare*), commonly known as White-root fungus, which greatly attacks Raspberry cane roots. Both of these root-rot diseases are saprophytic as well as parasitic, that is, they live on dead as well as on living wood. The best method of dealing with these troubles is to first of all thoroughly clear the soil of all dead roots of native trees, then remove and burn the diseased roots of fruit trees, and apply a good dressing of sulphate of iron, say, 1 lb. to 2 lb. to each six square feet of soil. Any area of Raspberries that is affected with the white-root fungus should be taken up and burnt, then thoroughly work into the soil the sulphate of iron, making certain, of course, that all affected dead or live roots are removed from the soil. I understand that the white-root fungus was written up in 1897 by Prof. D. McAlpine, late Victorian Government Vegetable Pathologist. This fungus was reported in the Wandin District as far back as 1878.

## New South Wales.

### News and Notes.

#### SYDNEY FRUIT MARKETS.

##### Agitation for Removal to More Commodious Site.

The opinion is firmly held by many that the time has come for the Sydney Fruit Markets to be removed from their present congested positions in the city, to a larger and more convenient position, with rail facilities, outside the city area.

A Committee of the Sydney City Council is now taking evidence on this subject, with a view to relieving the present serious congestion. On September 3, Messrs. A. J. Cooper and A. O. Small, President and Vice-President respectively of the Fruit and Vegetable Agents and Merchants' Association, said that rents were too high, and the markets should be removed to a site on less valuable land, served with a railway siding and with

room for expansion.

Mr. F. A. Nicolson, on behalf of the Fruitgrowers' Federation, and Mr. Fred Chilton, on behalf of the buyers, urged the removal to a more commodious position from two to four miles distant from the city.

Mr. C. E. D. Meares, Joint General Manager of the Producers' Distributing Society, has stated the case at length, and with considerable emphasis in favor of the removal of the markets. The present city site is too expensive. The value is approximately £400,000.

#### Municipal Wastage.

"The present buildings, which are of one floor, covering an area of, say, 6½ acres, provide no railway facilities for the quick and effective intake

and outgoing of so perishable a commodity. Picture the whole of this valuable block in the heart of this rapidly-developing city, adjacent, as it is, to the Central Railway Station and Darling Harbor, and also convenient to coastal and inter-State shipping, covered by a network of factories and/or warehouses from three to six stories, then one gathers a definite idea of the colossal wastage of municipal finance. Add to this the knowledge that no less than one-third of this most valuable ground space of the Fruit Market is utilised for the storage of empty cases, and we realise what the present rental impost means.

"The question whether the municipality derives a profitable revenue or otherwise does not materially affect the question at issue. Collateral to the wastage is the present system of letting the floor space in small draught-board sections, say, 12 feet by 6 feet, to a multiplicity of sellers, making systematic control of trading methods impracticable.

"The huge fruit market of Chicago was recently removed in seven months, and the proprietors of Covent Garden—the Beecham Estates Ltd.—only await the formal sanction of Parliament for the transfer from their present congested position to Bloomsbury. In both instances the necessity for direct railway facilities was an all-important factor.

#### Better Facilities Needed.

"The transfer to cheaper land close to the city, possessing such transport facilities would provide a more effective service and result in immense savings to the industries associated therewith. Both the grain and forage market and the abattoirs were recently removed from their city positions to the suburbs.

"The transfer of the fruit market to an outer zone with railway siding, would ensure the earlier delivery of and minimise the injury to, so perishable a commodity by excessive cartage and other handling. It would also encourage to a greater extent the running of special fruit trains, and also facilitate the carriage both ways with our large inter-State trade."

#### STATE FRUIT ADVISORY BOARD.

At a meeting of the N.S.W. State Fruit Advisory Board, held in Sydney on September 4, the opinion was expressed that the delay in gazetting regulations under the Farm Produce Agents' Act was detrimental to the fruit industry. It was decided to ask the Government to put the regula-

tions into operation before October 1.

#### Case Timber.

The proposed increase of the duty on imported softwood fruit-case shooks, received close consideration.

Mr. H. G. Such said that the duty on bulk timber was low enough to permit timber for cases being imported uncut and cut to size by local millers. The cases could then be sold to the growers at a rate practically the same as that paid for imported shooks.

The matter was deferred, pending the receipt of further information from the Minister for Trade and Customs.

#### Proposed Export Control.

Mr. N. H. Case said that an Export Control Board was proposed to regulate the export of Apples. Although this State only exported a few Apples, New South Wales had been made a dumping ground for the surplus Apples from Tasmania, Victoria and South Australia, and the projected Control Act was of great importance to local growers.

Mr. Case was appointed to attend the conference to be held in Melbourne on October 14, to deal with this matter.

Owing to the resignation of Mr. E. J. Polkinghorne, of Leeton, from the Board, Mr. W. Moses (Griffith), was appointed to fill the vacancy. The President, Mr. J. Heane, was elected to represent the Board at the conference of producers and consumers at Bathurst.

#### VITICULTURE.

Seasonal Report for the Months of July and August, 1926, by N.S.W. Department of Agriculture.

The weather conditions have been more favorable for ploughing operations, and the growers in the Hunter Areas, who have experienced trouble in connection with turning under weed growth, are proceeding as fast as possible to get the winter ploughing finished.

Pruning operations have been completed, and in the earlier localities the vines are bursting. It is to be hoped that the districts will not experience severe frosts, as with an early bursting results would be serious.

#### N.S.W. PRODUCERS' AND CONSUMERS' CONFERENCE.

Reports from Sydney state that at the conference between producers and consumers, which closed at

Bathurst on September 25, the various Committees indicated generally that they favored the principle of collective marketing and distribution, and that producers generally desired their products to be handled by Boards, upon which they would have a majority with reasonable representation. There had also been shown a general desire between producers and consumers for close co-operation, so as to improve marketing facilities and exports.

#### WILD FLOWERS FROM N.S.W.

Mr. Fred Chilton, apart from his well-known business as a fruit merchant in Sydney, is a keen horticulturist and a flower lover. During September, Mr. Chilton sent to the Editor of the "Fruit World" a box of N.S.W. wild flowers containing Waratahs, varieties of Eriostemon and Grevillea, Boronias and many other charming specimens of our native flora. The kindly thought and the beautiful flowers were warmly appreciated.

#### PERSONAL.

Mr. A. E. Blunt, of Messrs. Lincoln and Blunt, Sydney, is now touring Western Australia, South Australia, and Victoria, and intends to open up agencies for his firm in these States.

Mr. D. B. Adam, B.Sc., has returned to take up his duties as Plant Pathologist to the Victorian Department of Agriculture, after a two-years' post-graduate course abroad. Mr. Adam has gained a store of valuable knowledge, and it is hoped that he will shortly give lectures to fruit-growing audiences, detailing his experiences.

#### THE GREATEST TROUBLE

people have who suffer from Rheumatism or Neuritis is in preventing a return of the attack. It comes back year after year despite all the rubbing and ordinary treatment they undergo. This is because they do not drive the dregs of the complaint, which is a poisonous acid in the blood, from the system. No amount of rubbing will do that, the trouble is in the blood. A treatment for Rheumatism or Neuritis that aims at driving out of the system, the cause of the complaint is certainly commonsense. People who have used A.M.S.—a blood purifying medicine—acting through the Stomach, Liver and Bowels—finds that its action not only eliminates the cause of Rheumatism and Neuritis from the system, but fortifies it against future attacks. Therefore, try A.M.S. It is the medicine which makes you feel strong and well. Sold by all chemists and country storekeepers, at 3/6, by post 3/6. Manufactured by T. A. Dickson, Chemist, Geelong, Vic.



# The Apple Growing Industry

## AUSTRALIAN FRUIT IN GERMANY.

### Report of 1926 Season.

#### Prospects Excellent for 1927 Season.

The Trade Treaty With Germany gives America an Advantage in duty of 1/6 per Bushel.

Owing to High Duty Grapes From Australia Should not be Sent.

Interesting Report From Messrs. Ph. Astheimer and Sohn, Hamburg.

**A**N interesting review of the 1926 season, with Australian Apples in Germany, is to hand from Messrs. Ph. Astheimer and Sohn, Hamburg, dated July 31, of which the following is a summary:—

Quantity received: 248,458 cases, Apples, and 4,311 cases, Pears. The Apples were from Victoria (84,291 cases), W.A. (36,219 cases), Tasmania (34,866 cases), South Australia (11,487 cases, and re-shipped from England, 81,595 cases.

Compared with last season, state Messrs. Astheimer, when total imports amounted to 103,846 cases of Apples, we increased our imports about 150 per cent., this is very satisfactory. In the 1926 season we advised our Australasian friends to send five steamers, each with 30,000 cases; our estimates were over-run, yet for the bulk of the fruit good prices were realised.

While the season for American Apples was practically closed about April 15, the season for new Australasian Apples started with the arrivals of s.s. "Port Caroline," with 28,520 cases of Apples and 1,807 cases of Pears from West Australia, and s.s. "Delphic," with 24,030 cases of Apples from Victoria. Both steamers arrived almost on same day; to uphold the market the principal receivers agreed to sell "Port Caroline" cargo on April 29, and that of the "Delphic" on May 6. Thus good prices were realised for both cargoes. The further arrivals ex s.s. "Horatius" and "Abbecker," which were disposed of here during May and early June, realised, in spite of heavy arrivals via England, also very satisfactory prices, and were mostly disposed of at from Marks 13.— to 20.— with the majority selling between Marks 15.—

and 17.—. Gradually the prices eased off, partly due to low prices prevailing in England, but mainly by the poor delivery of s.s. "Witell." This cargo was in very bad condition, which demoralised the market. All told, about 180,000 cases were sold at very satisfactory prices, while about 60,000 cases had to be sold lower.

[For general calculation, reckon the mark at 1/—.—Ed. "F.W."]

Cleopatras, Dunn's, and Jonathans were the leading varieties, and realised top prices. Highly coloured Rome Beauties, Nickajacks, Spitzenbergs and especially Granny Smith, Rokewoods, Stone Pippins are also gaining steadily in favour. Five Crowns as a rule suffer too much from bruises, and Cox's Orange Pippins were this season in average of such poor quality that low prices had to be accepted. Sturmer Pippins are wanted when of fair appearance.

**Pears.**—The small quantities which arrived were eagerly inquired for, and could be readily disposed of. Prices realised varied according to quality. B. Bosc and B. Clairgeau realised mostly from Marks 12 to 15 per half case.

**Grapes.**—Small shipments of Grapes, which did not arrive in good condition, had to be disposed of at low prices, especially as Australasian Grapes are taxed with Marks 45 per 100 kg, against Marks 5 for Grapes coming from Spain and other countries. With the present high duty on Australasian Grapes we strongly advise to discontinue any shipments of Grapes.

### Prospects for Next Season.

**Apples.**—The prospects for next season will mainly depend upon how late American Apples will arrive in our market. If American Apples will be finished like the last two years before Australasian Apples commence to arrive, the latter will have a good chance to obtain again good prices. The general public is getting accustomed to eat more and more fruit, and many people consider an Apple the healthiest of all fruits.

During 1913/1914 Hamburg imported about 400,000 cases of Apples from Australia, and we feel quite confident our present imports can be easily further increased. We would strongly advise the Australasian shippers to make preparations for

increased direct shipments, on account of these giving the best

satisfaction. Shipments arriving via England suffer too much from handling, and arrive here mostly in more or less bruised condition, which is detrimental to the trade, and which does not increase consumption but rather decreases consumption because the public is getting supplied with Apples of no full value.

**Pears.**—The imports of Pears in our opinion could be increased to from about 12,000 to 20,000 packages in next season, for which we believe good prices could be realised.

**Duty.**—We effect all sales in our free-port, and prices realised are understood to be free of duty for the shippers, while buyers have to pay duty as soon as goods leave the free-port. We, however, consider it our duty to call the attention of the Australasian shippers to the fact, that on account of no commercial treaty between Germany and Australia the Apples and Pears from the latter country are taxed with a duty of Marks 15.— per 100 kg. against Marks 7.— for American Apples, which is equal to about Marks 2.80 for a case of Australasian Apples or Pears, against Marks 1.30 for American fruit. The difference being consequently about sh. 1/6 per case, which, of course, the buyers are calculating with when buying Australasian Apples. We feel sure we could greatly increase the outlet for Australasian fruit, if duty would be reduced, but there is no chance for it without a commercial treaty or any other arrangement between the two countries.

## THE EXPORT SEASON.

### Record Quantities.

The last export Apple season was remarkable, not only for the disastrous marketing conditions, but for the quantities shipped from Australia and New Zealand. The approximate figures are given as follows:—

|                       |           |
|-----------------------|-----------|
| Tasmania .. .. .      | 2,147,000 |
| Victoria .. .. .      | 400,000   |
| South Australia .. .  | 315,000   |
| West Australia .. . . | 300,000   |
| New Zealand .. . . .  | 730,000   |

Total .. . . . 3,892,000

## RETAIL FRUIT PRICES IN ENGLAND.

### Denial of Profiteering.

Much unsound fruit on the market.

In reply to published statements, charging retail fruiterers in England with profiteering, a spirited reply by Mr. Jas. H. Lincoln, wholesale merchant, St. James' Market, Bradford,

is published in the "Fruit, Flower and Vegetable Trades Journal," of London.

Mr. Lincoln, in his letter, notes the charge by Mr. Ramsden, M.P., that "Australian and N.Z. Apples were being sold wholesale at from 6/- to 9/- per case of 30-40 lbs., while the retail price was 6d. per lb." The Apples at 6/- to 7/6 per case were the 2 inch. grade (the size of a golf ball and practically unsaleable); for 2½ and 2¾ size, the price was 9/6 at port, or 11/- to 11/6 delivered to the inland retailer. "Per case of what?" asks Mr. Lincoln, "Certainly not 30-40 lbs. of sound fruit! The Apples that have been coming this past six or seven weeks have really been in a treacherous condition and thus the low price.

"At this very moment there are 400 to 500 boxes of New Zealand Apples lying in Vicar Lane goods yard, Bradford, and these cost Bradford merchants about 8/6 per box (carriage paid). Now, if Mr. Ramsden thinks these are all sound fruit he is entirely wrong, as the whole 400 or 500 boxes are only half sound, and will be fortunate to average 15 lb. or 16 lb. nett sound fruit. In fact, these very Apples will not get the retailer one penny profit at 6d. per lb.

"There have been more boxes of Apples returned (full of waste) from the retailer to the wholesaler during this past five or six weeks than has ever been known. However, to show what the Apple trade is like, and what profit is made, Mr. Ramsden can have with pleasure 300 or 400 boxes delivered to-day (Saturday) at 6/6 per box—New Zealand Apples.—Yours, etc.,

JAMES H. LINCOLN,  
St. James' Market, Bradford.

Commenting on this letter, the "Fruit, Flower and Vegetable Trades Journal" states:—"This letter, coming from a wholesale merchant, and not from one of the scapegoat retailers, had a good effect and showed a spirit of consideration and fairness that we much admire."

#### ENGLISH FRUIT CROPS.

##### Light to Medium.

The official report regarding the English fruit crops in the present season, dated July, 1926 (i.e., equalling January in Australia), is as follows:—

(Apples (culinary).—Variable, but a light crop is expected. Victoria, Grenadier, Lord Derby and Bismarck fairly good. Bramley's Seedling and Newton Wonder poor.

Apples (dessert).—Worcester Pearmain, James Grieve and Ellison's Orange are a fair crop generally. Other varieties are poor.

Pears.—Hessle, Chalk, Conference and Fertility promising; other varieties light.

Plums (ordinary).—Heavy crops reported in Kent and Cambridge. Good crops in Worcester. In other districts the crop is more variable, and there are few plums in some parts of the south-west. Czars, good; Victorias, very good; Pershores, good; Monarchs, very fair.

Plums (Gages).—Fairly good in Cambridge; good in Kent, but only average in other districts.

Plums (Damsons) promise a good crop in Kent, Cambridge and Worcester, but below average generally. Aylesbury Prunes a half crop.

#### PROLONGING THE EMPIRE APPLE SEASON.

A writer in the "Imperial Food Journal" for May suggests that "Australia and New Zealand should prolong their Apple exporting season by cold storage, as America is doing, thus reaching the English market during July and August, when there is a big demand for Apples during the holiday season. Save for the earlier and indifferent English varieties, none are available, and it is suggested that the competition of soft fruits would not be a disadvantage. The writer states that late varieties from the Otago and similar districts have reaped the reward of this market, and by cold storage a great part of the crop could be so held. Wembley showed what could be done in this respect, and what the demand was right through the season.

#### METHODS OF DEALING WITH CODLIN MOTH.

In the discussion following on the reading of his paper on codlin moth, by Mr. J. H. Lang, Harcourt, at the Portland Fruitgrowers' Convention, Mr. Lipscombe stated that he had found gains for spraying quite satisfactory.

Mr. Lang stated that the modern system was to have a man with a curved nozzle on the top of the tree, and a man on the ground with the gun. The important point was the size of the nozzle. With low a small nozzle was needed; with very high power you should have a larger nozzle. A pressure of 250 lbs. was required.

In reply to a question, Mr. Lang stated that in regard to trapping, he

found the male and female moths caught in the tins were in about equal proportion. Probably some of them had not laid their eggs when caught. The fruit was cleaner in that part of the orchard where tins were hung than in the parts where the tins did not exist. With a tin in every tree he had caught ten to a dozen moths in a night. He had also caught a few specimens of the light brown Apple moth, which many growers did not distinguish from the codlin moth. The only beneficial insects found were two or three ladybirds and a few lacewings, which feed on the larvae of the aphids. The proportion was so small as to be negligible.

Experiments had been carried out to find a spray to kill the egg before it hatched into the moth, but there was difficulty in getting an oil spray to combine with arsenate of lead. A reason why methods of control other than spraying should be concentrated on was because of the arsenic scare in England.

Mr. Lipscombe suggested that the law in reference to bandages should be enforced. On five trees he had caught an average of 85 grubs. If the whole of the orchards had bandages, and destroyed that percentage of grubs every year, the losses from grubby Apples would be greatly reduced.

Other growers suggested that bandages, unless very strictly attended to, were only a breeding ground for the moths. Experiments in regard to control were being carried out by the Department of Agriculture. In the meantime the only effective way was to bandage the trees and keep the Apples covered with spray.

In advocating scientific research into the life history of the codlin moth, Mr. J. H. Lang, a member of the deputation which waited on the Minister for Agriculture in regard to the resolutions of the Portland Convention, said that the orchardist paid a tax to the codlin moth of £100,000 per annum, and that pests took 15 per cent. of the crop, an amount equal to the Apples exported from the State. In Harcourt, in addition to the calyx spraying, seven or eight other sprayings were necessary. It cost the district roughly £1,000 for each spraying. Research would determine the emergence of the moth, and consequently the best time to spray.

Arsenical spraying might be reduced by trapping the moth. Orchard supervisors could oversee the experiments. For other diseases, the work of trained scientists was necessary.



# Victorian Cool Stores Conference

## Important Gathering at Doncaster, (Vic.)

THE EIGHTH ANNUAL CONFERENCE of the Fruitgrowers' Cool Stores' Association of Victoria, held at Doncaster on August 31, was one of the most successful ever conducted, there being over 100 delegates present, representing practically every cool store in Victoria. It was fitting that the Conference should be held at Doncaster, where the first cool store (Doncaster Central) was established by the Government over 20 years ago. Victorian cool stores now have space for practically 1,300,000 cases, or more than the rest of Australia and New Zealand put together. Of this, the Cool Stores' Association represents 758,000 cases.

The President (Mr. R. M. Finlay) took the chair, and delegates were welcomed to the district by Mr. J. Tully (Doncaster). Mr. J. H. Lang (Harcourt), feelingly expressed the sympathy of the gathering with the President in the loss of his mother, and referred to the loss sustained by the industry in the death of Mr. J. J. Mills, of Diamond Creek. A motion of sympathy was carried by delegates standing.

### Official Opening.

In the absence of the Minister for Agriculture, owing to ill-health, the Conference was officially opened by Dr. S. S. Cameron, Director of Agriculture, who conveyed the regrets of Col. Bouchier that he could not attend. In expressing his pleasure at the size of the gathering, Dr. Cameron stated that 15 or 16 years ago such a Conference would not have been possible. The first cool store in Australia was established at Doncaster 20 years ago, and was a success in three essential directions: (1) from the growers' standpoint, enabling them to hold fruit and avoid gluts; (2) from the consumers' point of view, giving them fresh fruit at all periods of the year; (3) from a commercial or business standpoint. The Government subsequently established cool stores at Ringwood, Tyabb and Burwood East; these were later sold to fruitgrowers' companies. Victoria now had more fruit cool stores than the whole of the rest of Australia, and more in proportion to population, fruitgrowing area, number of orchards, than in any other country in the world.

Dr. Cameron also referred to the investigations being conducted regarding processes and methods for

the best utilisation of this wonderful system—refrigeration. He was hopeful that in the future there would be greater continuity of service of the officers in the Science Branch investigating fruit cool storage problems than had been possible in the past.

Visitors present included Mr. W. H. Everard, M.L.A., Mr. R. Crowe (Superintendent of Exports), Mr. J. M. Ward (Superintendent of Horticulture), Messrs. J. Hepburn and S. H. Hardcastle (Institute of Refrigeration), G. A. Cook (Council for Scientific and Industrial Research), G. B. Tindale (Department of Agriculture), J. W. Aspinall (Metropolitan Association), B. S. B. Cook (V.C.C.A.), and Mr. Louey Pang. Apologies were received from Messrs. R. E. Boardman (Fruit Council), W. J. Williamson, C. T. Browning, P. T. Young, H. L. Tomkins and W. Mackinlay.

The minutes of the previous conference were confirmed. Correspondence was received, and the following stores admitted as new members:—Graceburn Valley Orchard (Healesville), Elinora Orchard (Wheeler's Hill), Pakenham, and Bunyip.

On the motion of the President, it was decided to send a telegram to the Prime Minister wishing him success in his mission to the Imperial Conference.

The report and balance sheet were adopted, the President stating that finance was in a satisfactory condition. Referring with satisfaction to the fruit packing classes established by the Department of Agriculture, he urged that more boys be encouraged to take up this class of work, and to stay in the fruit industry.

### Self-Registering Thermometers.

On the motion of Mr. J. Tully (Doncaster West), seconded by Mr. W. Lipscombe (Croydon), Conference reaffirmed the desirability of installing self-registering and long-distance thermometers on ships carrying fruit overseas.

Mr. R. Crowe (Superintendent of Exports) stated that for the last 20 years every steamer carrying perishable products from Canada had thermometers installed in each hold. He had visited the "Orama" on her arrival at Port Melbourne the previous day, and there saw the first long-distance thermometer installation that had been installed on Australian vessels. In two holds there were six points. It was hoped that before long every vessel of the Orient Line would have these long-distance electrical

thermometers. The cost was about the same as for putting in electric light points, about £1 per point. An installation of self-registering thermometers was included in the Government Cool Stores when built in 1914, and they had a record showing the temperature for every hour, day and night, Sundays and holidays, ever since.

Mr. J. H. Lang, in supporting the motion, urged that steps should be taken also for the installation of instruments to detect the concentration of carbon dioxide, one of the chief troubles in the overseas carriage of fruit.

### Quarterly Returns.

Mr. J. M. Watt (Hastings) referred to the necessity for stores registered under the Industrial and Provident Societies Act 1924, to file returns quarterly in regard to share capital, a filing fee of 5/- being charged for each return. There was no variation in capital, yet the return and the fee had to be lodged. It was decided that the Secretary get in touch with the Registrar-General with a view to obtaining relief.

### Returns of Fruit in Store.

The Secretary (Mr. J. G. Aird) stated that the question of compiling monthly returns of the amount of fruit held in store had been brought up at the Frankston Conference. The idea was to give stores an idea as to how to market their fruit; if there were large holdings, they would not hold; if only small holdings, it might pay to hold. The matter was put in hand last year, but returns had not been forwarded promptly, and some stores had not reported at all.

Mr. F. Stockton (Tyabb) in moving that the stores continue to make returns of the quantity of fruit held in store on the first of each month from June to December, being advised promptly of the total holdings, stated that now the Brisbane and Sydney markets were becoming payable, if growers knew how much fruit was in store it would give them an idea whether to send heavily straight away, or just to send a small consignment each week. The motion was seconded by Mr. T. White (Somer-ville), and carried.

Mr. R. Crowe, speaking on behalf of the Government Cool Stores, promised to send in returns the same as any other store.

### Affiliation With Fruit Council.

It was resolved, on the motion of Messrs. F. Stockton and C. Wallace, that the Association affiliate with the Apple and Pear Section and the Met-

ropolitan Section of the Victorian Fruit Council.

#### Shipment of Fruit to China.

Mr. Louey Pang, who had just returned from China, reported on the recent shipment of 250 cases of Apples sent to Hong Kong. The fruit was not in the best condition, nor of good varieties, and averaged 12/- per case. Two hundred cases of Tasmanian Apples which arrived about the same time sold at 17/- per case; they were good varieties, a nice color, and very sound. The fruit had to meet the competition of Japanese Apples, which were a very nice color, red, and of good appearance, but soft; therefore they did not bring a good price, averaging 8/- or 9/- a case in Shanghai. "The Chinese like hard

fruit was very keen. Shanghai was a big city with a big population. It took 2,000 cases a week of Californian Oranges (11-13 bushel case), which brought up to 31/- per case. It was worth while copying the American organisation, which sent even supplies every week. Australians must make up their minds to spend some money to get the market and keep it. The possibility of the market in China was very great; there were 500 millions of people, and they had no room to grow fruit. They must look for supplies from abroad.

A hearty vote of thanks was accorded Mr. Pang for his attendance.

#### Cold Storage Research.

An interesting paper was read by Mr. G. A. Cook, M.Sc., B.M.E., of the

a hindrance to the development of a successful commercial system of refrigeration.

Another matter of potential importance to the Australian fruitgrower, said Mr. Cook, was the recent formation of the Empire Marketing Board, which had been formed as a result of a recommendation by the Imperial Economic Committee. The Marketing Board would eventually control funds to the extent of £1,000,000 per annum granted by the British Government for the purpose of fostering Empire trade in food products. It was probable that a very appreciable proportion of these funds would be spent in co-operative schemes of food research. In that connection the Council for Scientific



Top left—The first Fruitgrowers' Cool Fruit Store in Victoria: Doncaster Central. Top right—Group of Delegates at the Cool Stores Conference. Bottom Left—The discussion: Messrs. A. Zerbe, A. F. Thiele, W. J. Whitten, Ed. Lawford. Bottom left—The Orchardists' Cool Stores Pty. Ltd., Doncaster

Apples—they have good teeth and want to use them."

As it was late in the season, Mr. Pang stated, the results were encouraging, particularly as the variety and quality were not of the best. There was a market in China for both dried and fresh fruit. Of £216,179 worth imported in 1924, Australia's share was £38, or .017 per cent. With fresh fruit it was necessary to ship to Shanghai and Canton as well as Hong Kong, which was over-supplied, and where competition with American

Council for Scientific and Industrial Research, in which he outlined a few of the developments that had taken place in regard to fruit cold storage during the past 12 months. Preliminary information as to the results obtained by the British Food Investigation Board's second expedition to Australia was now becoming available, from which it appeared that the centre of a ship's hold carrying fruit was often from 10 to 20 degrees Fahrenheit higher in temperature than the other portions. Lack of data was

and Industrial Research would act as the means of liaison for Australia. The Council regarded the initiation of fruit cold storage research as a matter of importance, and was hopeful of a highly trained expert from the British Food Investigation Board visiting Australia in order to report on the whole position. The Council also hoped to obtain the services of another Food Board Expert for a period of five years. In addition, it was taking active steps to train up a body of Australian fruit research experts,



and had already sent one young university graduate for experience at the Cambridge Low Temperature Research Station. It was hoped to send another graduate at an early date. Mr. Cook also stated that the Council was very anxious to extend cold storage to other fruits, including the tropical fruits, Pineapples, etc. Mr. Cook was thanked for his information.

#### The Department's Experiments.

Mr. G. B. Tindale, B.Ag.Sc., of the Department of Agriculture, read an interesting paper dealing with the cool storage experiments which have been conducted by the Department. These were divided into two sections, those dealing with hard fruits and those with soft fruits. The latter class of fruit offered the greatest possibilities for the future, meeting with practically no competition on the English markets.

This year experiments were conducted with Oranges, Grapes, Passion Fruit, Pears and Apples. In Oranges the limiting factor to successful cool storage was found to be green mould (*P. glaucum*). This trouble was in no way brought about by cool storage conditions, but originated in bruised and damaged fruit, and might be prevented by careful handling during picking, grading and packing. Experiments seemed to indicate that the best temperature at which to store Oranges was over 40 deg. F., a pronounced browning of the skin being met with at lower temperatures.

With Grapes, the chief trouble regarding export in the past had been the presence of moulds. Experiments conducted this year gave ground for considerable optimism regarding the future. The best varieties for export were those with berries that did not readily fall from the stalk: Ohanez, Purple Cornichon and Emperor were suitable. Investigations carried out by the Science Branch had shown that moulds developed in the cork used for packing, and by sterilising this cork packing by heat, experimental shipments of Grapes had arrived in London in perfect condition. In addition, it was found that the treated cork could be readily shaken from the bunches.

Passion Fruit had been held successfully for six weeks at a temperature of about 38 deg. The fruit was plump and of good flavor, but a large percentage was affected with a wet rot of the skin, *Botrytis cinerea*, which did considerable damage to both fruit and vine. Efforts were being directed to the control of this disease in the orchard.

With soft stone fruits the limiting

factor also was the presence of moulds. It was useless to attempt to ship fruit from an orchard infected with brown rot.

In regard to Apples and Pears, there was no difficulty in cool-storing this fruit on land. The worst trouble with Apples was scald, which was

side and placed in cool store as soon as possible. There was little difficulty in keeping them for several months in land stores, but many overseas shipments had been attended with disastrous results, the fruit arriving in absolutely worthless condition. Figures were quoted showing that in nearly every instance the fruit was three weeks from time of picking before the cargo was cooled sufficiently to prevent ripening. The blame was not on the shipping companies, who had to take in a full hold of hot fruit at the one time—a thing a land store was never asked to do. Fruit being a living organism, generated heat in process of breathing. A chamber stacked full of hot fruit gained heat. This showed the necessity for precooling the fruit to about 30 deg. for Pears. The ship's engineer had then a simple task, for at such temperature the fruit was practically dormant, no heat being developed; also respiration was at a standstill, and consequently there was no accumulation of carbon dioxide. This suggested an obvious way of overcoming brown heart in Apples. To secure successful export, Pears should be kept in store until there was enough to fill a hold. Growers who followed these methods had proved that a highly profitable market existed for Pears arriving in good condition.

In reply to a question, Mr. Tindale stated that it was essential to send Pears in a chamber to themselves, and not mixed with other fruit.

Several growers mentioned their successes with Pears picked on the green side and pre-cooled. Mr. J. H. Lang, in moving a vote of thanks to Mr. Tindale, expressed pleasure that scientists were now taking this matter up.

#### Insurance.

Mr. J. W. Barrett (Ringwood) submitted proposals for joint action in the matter of consequential loss insurance. The advisability of stores insuring against loss of standing charges was stressed by several speakers, and the matter was deferred for further consideration at next quarterly meeting.

Mr. Barrett also submitted a graph showing the working costs of the various stores, which proved of considerable interest to delegates.

#### Export Control.

The proposed Bill for the control of fresh fruit export was outlined by Mr. J. W. Bailey (Narre Warren), who urged growers to support the establishment of a Control Board. Mr. F. Thomas (Bunyip) and Mr. J. H. Lang also spoke in support. Con-

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Deansgate, Manchester.  
Telephone: Central 7156.  
Telegrams: "Geracost, Manchester."  
17, Humber Street, Hull.  
Telephone: Central 4041 Y.  
Telegrams: "Geracost, Hull."  
Southampton Docks, (Facing No. 45 Shed).  
Telephone: Southampton 2610.  
Telegrams: "Geracost, Southampton."  
Eclipse Yard, Westgate, Mansfield.  
Telephone: Mansfield 440.  
Telegrams: "Geracost, Mansfield."

proved to be due to climatic conditions. The most important factor in the long storage of the better class of Apples was to pick them at the right stage of ripeness—when quite hard, juicy and sweet—and cool as soon as possible. Immature fruit was by far the most susceptible to scald.

Pears must be picked on the green

sideration of the matter was deferred to the special conference on September 22.

#### Cool Storage and Overseas Transport.

A valuable paper was read by Mr. R. Sutherland, Chief Engineer of the Orchardists' Cool Stores Co. Ltd., dealing with the transport of fruit in cool storage. He stated that the production of high-class fruit had to be conducted in alliance with nature, and in obedience to her laws. No two seasons were alike, and although fruit picked in two consecutive seasons might receive similar treatment in cool storage, different results were obtained from year to year. A record should be kept of these changes, and the results tabulated.

Efficient ventilation was essential, no matter what system of cooling was employed. Apple scald—a physiological disturbance inherent in the fruit itself—was retarded more by a low than a high temperature. Further evidence was given of the importance of pre-cooling fruit for export, the figures given showing that it was practically impossible for a ship's engineer to reduce the temperature of a hold full of hot fruit within the time necessary to preserve its quality. The cost of pre-cooling would be infinitesimal compared to the benefits derived. Concluding, Mr. Sutherland suggested that the atmosphere of the holds should be controlled by suitable carbonic acid gas indicators, and the ventilation regulated from time to time. The observance of these conditions would obviate the losses so frequently experienced at the present time.

#### Electricity and Storage.

Mr. McArthur, of the State Electricity Commission, read a paper dealing with the electrification of Cool Stores, pointing out the many advantages to be derived. The figures quoted were mostly estimates, but Mr. McArthur stated he hoped to be able to give more concrete suggestions at a later date.

A most interesting address, illustrated by diagrams and demonstrations, was delivered by Mr. B. G. Nichol regarding the electrical energy contained in fruits. It was shown that the Apple contained the highest amount of stored electrical energy. The effect of electricity in forcing plant growth was also referred to. Hearty votes of thanks were accorded the speakers.

#### Election of Officers.

Officers for the ensuing year were elected as follows:—President, Mr. J. Tully (Doncaster West); Vice-Presi-

dent, Mr. W. Mock (Burwood East); Auditor, Mr. J. W. Barrett (Ringwood); Council Member to Chamber of Agriculture, Mr. J. H. Lang (Harcourt); Representative to Apple and Pear Growers' Association and Metropolitan Association, Mr. J. G. Aird (Ringwood); Secretary and Treasurer, Mr. J. G. Aird.

#### The Luncheon.

At the complimentary luncheon tendered by the ladies of Doncaster, Mr. W. H. Everard, M.L.A., responding to the toast of Parliament, regretted the proposed repayment of the Fruit Marketing advance, and urged growers to seek stronger representation on the State Fruit Advisory Board, so that it would be more truly representative of the growers.

The President submitted the toast of the Department of Agriculture, associated with the names of Dr. Cameron, Mr. Ward, and Mr. Crowe. Dr. Cameron, in response, slyly suggested that the Minister had not been asked to cancel the amount granted to the F.M.O., which growers themselves had dubbed an "advance."

Mr. Ward stated that nearly six million cases of fruit were produced in Victoria last year. In the Cool Stores Association was a fine nucleus for a strong selling unit; they should adopt a single brand, on the lines of the "Sunkist" organisation in California, which was known all over the world as a standard of quality.

Mr. Crowe considered that Victoria was well up-to-date in her treatment of cool storage problems. A paper by Mr. Sutherland, which he had read at the International Refrigeration Congress at Wembley in 1924 had been the subject of favorable comment by experts from all over the world.

Opportunity was taken by the President at tea to tender a graceful tribute of thanks to the ladies of Doncaster for their entertainment, Mrs. J. Tully responding on behalf of her assistants.

#### The Doncaster District.

The following day (September 1st), delegates assembled after lunch at the Doncaster West Cool Store for an inspection of the stores in the district, when a most enjoyable time was spent, the large party being conveyed by car from point to point. It was remarked at the conference that the large number of motors parked in front of the hall seemed to indicate that at least a proportion of the "poor" fruitgrowers were thriving.

The store at Doncaster West had a capacity of 40,000 cases, and the directors are Messrs. John Tully, John

Petty, and A. T. Tully. The next store visited was that of Lawford's Fruit Exchange, which has a capacity of 17,000 cases. At this store is a complete case-making plant, practically all the cases and trays used being made on the premises. The packing-shed is efficiently fitted up, with Rownson roller conveyor for moving the cases, and a convenient paper-holder for the packers. Last year 1300 cases of Pears were shipped in trays, with good success. The varieties in store at the time of the conference were chiefly Winter Nelis, Josephine, and Beurre Bosc. Messrs. Lawford have 64 acres of Pears and Apples (chiefly Rome Beauty and Yates), and 25 acres of Peaches, which are disposed of locally. In their very complete plant, Messrs. Lawfords also manufacture the "Quitite" Hose Clamp, a metal device which has proved very satisfactory on the spray pumps.

Doncaster Central was next visited. This is the original Cool Store erected by the Government, and is of different design from the more modern ones, being in two sections, with loading platforms in the middle. The capacity is 20,000 cases.

The next stop was at the huge Orchardists' Co-op. Cool Stores, its two sections having a capacity of 120,000 cases, fitted with an emergency plant. Visitors were interested in the working of the machinery, and the engineer was much in demand. Samples of fruit from the store were pronounced highly satisfactory.

The East Doncaster Store has a capacity of 20,000 cases, and an extra chamber is now being erected to hold 4,000 cases. The Directors are Messrs. Geo. Knee, J. Robinson, and A. E. Ireland. The cars then took the road for Templestowe, a halt being made at the property of Mr. E. Wagstaff, the highest point in Doncaster, whence a magnificent view was obtained over the surrounding country. The whole district looked very pretty, its undulating green hills almost covered with orchards, just touched with the pink and white of Peach and Plum, and broken by the dark lines of tall pine wind-breaks.

The Templestowe Store, of 20,000 cases capacity, was next visited, delegates being welcomed by the Chairman of Directors, Mr. A. Chivers. Tea in the Memorial Hall, tendered by the ladies of Templestowe, and a brief address of welcome by Cr. Smith, the newly-elected President of the Shire, terminated a successful conference.



## Victoria.

Crop Reports :: Melbourne Markets :: News and Notes

### FRUIT CROP REPORTS FOR AUGUST.

#### Deciduous Fruit.

Reports from all districts indicate that all kinds of deciduous fruit trees promise a medium to good crop. Passion vines and small fruits also promise well. Should late frosts be experienced, however, the Passion vines and Apricots may be seriously affected.

There is still a large quantity of Apples and Pears held in cool storage. The leading varieties of Apples held are Yates, Rome Beauty, Statesman and Jonathan. The Pears in store are chiefly Winter Cole, Winter Nelis, Josephine, Packham's Triumph, and Beurre Bosc.

Owing to an abnormally wet winter in many districts, there is a danger of

whole, satisfied with the prices for their fruit, more particularly Sultanas. The prices for Currants would be more pleasing if they were a little higher.

#### Citrus.

There is little probability of any export overseas this season. Prices for good quality Navels are well maintained. Large size and off type Navels are, however, somewhat hard to dispose of. Lemons are now being harvested, and large quantities are being forwarded to processing factories. The Lemon crop is a very good one in Victoria this year. Citrus trees generally are looking well, and in many districts the spring growth is appearing.

#### PERSONAL.

At the recent Show at Diamond Creek, presentations were made to Mr. A. F. Thiele and Mr. Jos. Jordan, both of whom have been judging at fruit shows for over 30 years.

#### MELBOURNE FRUIT MARKETS.

#### Removal to Victoria Street Advocated.

Much careful thought is being given to the matter of the proposed removal of the Western Market, Melbourne, to a position alongside the municipal retail market in Victoria Street.

The original site of the Western Market has for many years been inadequate to accommodate the ever-increasing volume of Melbourne's wholesale fruit trade, and the time has arrived for frankly facing the position, viewing the present necessities and the developments in the next 30 to 50 years.

The fact that a considerable portion of the fruit consigned to the Western Market is carted and sold in the Victoria Market, is deemed an additional reason for these two markets to be in close proximity, in other words to concentrate the fruit-selling business of Melbourne in a huge market in Victoria Street.

The present site of the Western Market is held by the City Council under charter for marketing purposes only, but it should not be a difficult matter for statutory authority to be given, vesting the title in the City Council for building or other pur-

poses if a quid pro quo be arranged in providing better marketing facilities elsewhere.

#### SHEPPARTON PACKING SHED.

At the fourth annual meeting of Shepparton Orchard Products Ltd. (packing shed), at which the Chairman of Directors, Mr. A. H. Carver, presides, it was stated that a profit of £288/2/5 had been made on the year's operations, reducing the adverse balance to £154/18/10. Business had considerably increased during the year, especially the country trade.

Agencies, particularly for spraying materials, taken up by the company had proved profitable to growers, prices for orchard requisites having been considerably reduced. In consequence of the attitude taken up by the company 1/1½ had become the standard price for cases in the district.

A new section had been erected, and machinery installed for treating

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dried fruits, and this was working satisfactorily. Retail stores had been opened in Geelong and Colac, and four barrows were being run in Melbourne. The company had secured unlimited orders at payable prices for all the Lemons available.

A lengthy discussion took place on the best means of making the shed more popular among growers, thus ensuring a regular supply of fruit. The proposal to suspend packing operations and confine the company's activities to the sale of orchard requisites was strongly opposed, the majority of those present being distinctly of opinion that the indirect benefit received by growers from the fruit-packing carried on at the shed was in itself sufficient to justify its retention as a packing enterprise.

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**PROMPT RETURNS**

fruit trees being somewhat affected with fungoid diseases. Most of the pruning is now completed, and growers are busy with spraying of Apricots and Peaches for Leaf Curl. Control measures for scale and aphids are receiving special attention.

Good prices for Apples and Pears are being maintained.

#### Viticulture.

Growers of vine fruits have just about completed the pruning, and are now busy with ploughing. It is noticeable that many more vignerons are growing legumes and other green crops for manurial purposes than was formerly done. Greater attention is also paid to manuring the vines with commercial fertilisers.

Dried fruitgrowers are, on the

It was resolved that a Committee should be appointed to investigate and report upon the general management of a shed and the methods of packing.

In an effort to increase the consumption of Oranges, the company held an "Orange Day," on August 12, when more than 200 cases were sold from the four city stalls. This is more than double a normal day's sales. Several more "Orange Days" are to be held before the season closes.

#### PROPOSED EXPORT CONTROL BILL.

A Conference between the Executive of the Apple and Pear Growers' Association of Victoria, and representatives of the Fruit Exporters' Handling Committee, was held at Melbourne, on August 18. Mr. J. H. Lang presiding. There were also present Messrs. Thomas, Bailey, Willoughby, Carne, and James. The exporters were represented by Messrs. J. B. Mills, F. R. Mellor and C. J. Parnham.

The proposed Export Control Bill was debated. The Chairman said that the main objections were the undue preponderance of Tasmanian representation and that f.o.b. sales were not adequately safeguarded. The difficulty might be overcome by reducing Tasmanian representation from three to two, leaving three from the mainland and one from the f.o.b. buyers.

Mr. Mills said the Exporters' Committee opposed the Bill as being unnecessary. An Advisory Board could do all that was required. If the growers insisted on a Bill, a more workable one than that submitted should be drafted. Messrs. Mellor and Parnham also spoke against the proposed Bill, giving their reasons. Messrs. Bailey, Thomas and Lang spoke in favor of the Bill, the debate being conducted in a friendly spirit.

It was decided by the Association to call a special conference of all interested to consider the subject on Wednesday, September 22, at 2 p.m., at 325 Collins Street, and to request the attendance of a member of both the Dairy and the Dried Fruits Control Boards to speak; the Exporters' Handling Committee to be asked to submit suggestions by which the proposed Board could operate smoothly.

An executive meeting of the Apple and Pear Growers' Association was then held. Mr. Lang was deputed to write to Mr. C. H. Jost (Quantong), requesting reconsideration of that Association's decision not to affiliate. Regret was expressed at the decision of the Government to obtain

repayment of the £2,000 grant for organizing the marketing scheme—referred to the special conference on this subject on Wednesday, September 22, at 10 a.m.

It was decided to request the Minister for Markets (Mr. Paterson) to defer the proposed Interstate Fruitgrowers' Conference till October, and that two delegates from each State be invited.

The following resolutions were passed by the Pakenham branch of the Apple and Pear Growers' Association at their meeting held on August 14, 1926.

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(1) That this Association objects to Tasmania having more than two representatives on the Board. (2) It is essential that the Government representative on the Board should be a man approved by the fruit-growers. (3) That when a new Bill is being drafted, ample provision be made for f.o.b. and f.o.r. sales. (4) That a levy, not exceeding one penny per case, be made on all fruit exported.

#### PROGRESS AT KYABRAM.

The annual report of the Kyabram Fruitgrowers' Association showed that wonderful progress has been

made and good work done during the year. The cannery has had good success with Orange Cling Peaches, some of which were of export quality.

Mr. F. J. Churches was re-elected President and Mr. G. F. Markham, Secretary, for the ensuing year.

#### GOULBURN VALLEY FRUIT.

The principle of a compulsory levy on production was approved at a meeting of the Northern Victoria Fruitgrowers' Association, held at Merrigum on July 30.

Mr. F. J. Churches, Secretary of the Canning Fruit Growers' Association, stated that the proprietary canners were offering growers £12 a ton on loading station for canning fruit for next season, and that a conference would be sought with the co-operative canners who processed the most fruits, with the object of obtaining £12 a ton from them.

#### PEAR BLIGHT AND RESISTANT STOCKS.

In connection with the resolutions regarding a Plant Quarantine Station and Experimental Orchards at the recent Portland Convention, reference was made to the damage done by aphids attacking the roots of Pear trees, and the need for importation of resistant stocks.

Mr. J. M. Ward, Superintendent of Horticulture, in reply stated that the Department were introducing resistant stocks. They were importing from Japan (in quarantine), 10 lbs. of seed of *Pyrus calleryana*, which, as far as can be gathered, was either immune or highly resistant to Pear aphids. As Japan, however, was known to have the Pear blight—a much more serious disease—the utmost precautions were necessary. Ten pounds of *Pyrus ussuriensis* seed had been imported; this variety is immune or highly resistant to bacterial Pear blight. This seed could not, however, be distributed, but the Department proposed to germinate the seed and grow the stock under quarantine conditions. Up to the present this stock had not been tried in Australia.

Mr. Ward expressed the hope that the commercial nurserymen would take up the question of producing a resistant stock, as by growing our Pear trees on such stock, the aphid trouble would be reduced to a minimum.

Before the Conference concluded, it was moved by Mr. J. B. McDonald, seconded by Mr. A. F. Thiele, and carried unanimously—"That this Convention requests the Department of Agriculture to establish experimental orchards and Citrus groves in parts best suited to their culture for the



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Solicited

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years experience in selling  
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Agent required for  
supervising shipping  
and  
advising consignments

purpose of conducting tests in manuring, stocks, cultivation, and general practice."

## VICTORIAN FRUIT COUNCIL.

A MEETING of the Victorian Fruit Council was held on September 23, the President (Mr. J. H. Lang, Harcourt) presiding. There were also present, Messrs. J. A. Rushton and W. F. Cooper (Northern), R. M. Finlay and J. Tully (Metropolitan), F. Thomas (Apple and Pear Growers), and the Secretary (R. E. Boardman). Professor A. C. D. Rivett, M.A., D.Sc., a member of the Executive of the Council for Scientific and Industrial Research, who attended by invitation, gave a helpful address, which is reported fully elsewhere in his issue.

**Fruit Marketing Proposals.**—Mr. Rushton submitted a report of the meeting held the previous day. A big attendance was present in the morning, when a Committee was appointed to meet the same evening and draft details. The Committee, after considering all suggestions, had recommended that the matter be referred back to the Associations for further consideration.

The Chairman said that in brief, it was hoped to make better use of the existing channels. The report was adopted.

**Scientific Research.**—Following on Professor Rivett's appreciated address, it was decided on the motion of Messrs. Tully and Cooper, to send a letter to Senator Pearce, congratulating the Federal Government on providing £250,000 for Scientific Research.

**44-Hour Week.**—The Chairman reported that, as requested, he and several other growers had interviewed the solicitors, Messrs. Derham, Robertson and Derham, and evidence had been prepared showing how the proposed 44-hour week would increase the cost of production.

Mr. Rushton and Mr. Tully reported that their Associations had also prepared evidence. The reports were received.

**Citrus Association.**—The Secretary reported that no reply had been received from the letter to the Citrus Association, re affiliation.

**£2,000 and F.M.O.**—On the motion of Messrs. Finlay and Tully, it was decided to ask the Minister for Agriculture not to enforce repayment of the advance of the £2,000 for the Fruit Marketing Organisation, as it was the fear of that repayment which was prejudicing the plans for the Orchard Tax.

**Resignation of Mr. Tully.**—Mr. Tully submitted his resignation owing to pressure of other duties. On the motion of Messrs. Rushton and Finlay it was decided to accept the resignation with great regret, and to cordially thank Mr. Tully for his valued services.

**Exports to Germany.**—The Chairman reported that under a trade treaty between Germany and America, the latter country had a preference of 1/6 per case over Australia on Apples sent to Germany. It was decided to request the Prime Minister to arrange a similar trade treaty between Germany and Australia.

**Government Financed Plantings.**—Mr. Cooper moved that before the State Government finance any additional plantings, a full enquiry be made into the position of the canned fruit industry. The motion was seconded by Mr. Rushton and carried.

It was further decided to send the resolution to the Minister for Agriculture and the Irrigation Commission.

## IRRIGATION PROBLEMS.

### Important Departmental Research.

INVESTIGATIONS have been carried out over a considerable period by the Victorian Irrigation Research Committee regarding salt injury to soils through prolonged irrigation. Comprehensive experiments have been conducted at Tresco, a rich Citrus settlement of 2,000 acres; these have brought to light facts which suggest a remedy that, if proved successful, will mean the saving of immense areas from going out of cultivation.

In the rich mallee lands of the Murray Valley, many thousands of acres have suffered loss of productivity through the salt being brought to the surface by continued irrigation. The experiments suggest that scientific deep drainage will remedy the trouble, and render the lands again suitable for fruit production. The experiments at Tresco are on a scale never before attempted in any part of the world, and the final results will be awaited with keen interest.



(GIBBS BRIGHT & CO.,—See Page xiv.)

# The Better Farming Train

## Splendid Achievement In Victoria

### Government Departments Assist the Primary Producer

**B**EFORE LEAVING on July 24 for its eleventh tour of the country districts, the Victorian Better Farming Train was inspected by His Excellency the Governor (Lord Somers) and Lady Somers. The train, consisting of 14 special cars and trucks, all painted a brilliant yellow, is perhaps the finest means yet devised for the betterment of agricultural education. In this way the accumulated expert knowledge (both scientific and experimental) of the Agricultural Department is brought to the farmer in his own district; in the midst of the actual conditions he has to deal with, he is able to watch the scientific demonstrations, and question the expert officers in regard to the problems confronting him.

As this tour was mainly through the Mallee country, the cars dealt chiefly with problems affecting the wheat farmer, but a fine fruit exhibit was arranged at Mildura by the horticultural officers. This included displays of packed fruit, from the first layer to the finished case, in the various sizes of Oranges, Lemons, Apples and Pears. Grapes were also displayed. Mr. Basil Krone gave demonstrations in the packing of Citrus fruits, and Mr. F. de Castella (Viticulturist) demonstrated the testing of Grapes for the sugar or acid contents in connection with the regulations governing the standard of maturity. Mr. S. A. Cock (Citriculturist) gave demonstrations in the budding and re-working of Citrus trees, and general hints on Citrus culture. In addition, addresses were given to the large crowds assembled at Mildura by Mr. Castella on viticulture, and by the Superintendent of Horticulture (Mr. J. M. Ward) regarding fruit questions generally.

In the general farming cars were dairy cattle, sheep, pigs and poultry, of both good and bad type, to demonstrate to the farmer on the spot the kind it is profitable to keep. There were model hen-houses, coops and feeding troughs, pig-pens, and silos, handy farm devices, and the latest dairy appliances, as well as unsatisfactory types. Specimens of wool were shown from the different classes of sheep. There were veterinary specimens, and demonstrations as to the care and feeding of stock, and the different values of fodders.

In the Wheat cars were blocks of

crop cut straight from the field to illustrate differences in manuring and cultivation, crop rotation, germination tests, the action of a claypan, two vessels indicating the effect of gypsum in clearing muddy water, comparative results of different methods of pickling the grain, varieties of Barley, Oats, etc. A striking object lesson was that showing the value of cultivation to retain moisture; two blocks of soil, as cut from the field, were enclosed in glass. Both were consolidated at the bottom. In one the surface soil was left in rough, hard clods; in the other it was

Nerium, Tamarisk, Tree Lucerne, Hakea, and others. On the windows were colored plates beautifully depicting many flowering shrubs and plants for the garden. Information regarding bees and honey was included. Special attention was given to Potatoes and vegetables. Specimen bottles contained examples of the more important orchard pests and diseases, with alongside the methods of treatment. All around the inside of the cars were written up bright slogans inculcating "Better Farming" practice, such as: "Proper Packing Pays," and "Standardisation Simplifies Selling."

A most interesting exhibit, arranged by the Chief Orchard Supervisor (Mr. H. W. Davey), showed specimens of the destructive insects the orchardist has to fight, from the tiny San Jose scale to the huge Vine



*The Better Farming Train at Mildura:*

broken up in a fine tilth. On the glass over the cloddy section were great drops of moisture, showing the large evaporation from the soil; over the other plot there was none, the cultivation having destroyed the capillary action and prevented evaporation.

A large colored aerial photograph of the Werribee Experiment Farm was a prominent feature.

In the horticultural car attention was devoted to the beautifying of the farm homestead. Specimens of shade and ornamental trees and plants suitable for the districts visited, were supplied by the Victorian Nurserymen and Seedsmen's Association, and included *Brachychiton acerifolium*, *Jacaranda mimosifolia*, numerous *Eucalypts*, *Cupressus lambertiana horizontalis*, *Phoenix canariensis*,

Hawk Moth. Particulars were given of their life history, and the treatment necessary; and a further case contained examples of the nine classes under which all insects may be grouped. This section is particularly valuable, for a puzzled orchardist may be able to pick out the pest that is troubling him (which he perhaps could not otherwise identify), and ask the officers on the train for advice re combating it.

A further car was devoted to the interests of the farmer's wife. Here lady demonstrators give lessons in cooking, needlecraft, and home management; there are plenty of useful hints for labor-saving, even in the bush. A Sister from the Victorian Baby Health Centres Association was in attendance, and in addition to giv-



"Lightning" Junior, with Packing Bins attached.  
 Four Bins, each about 3ft. 3in. x 3ft. 3in.  
 Two Bins, each about 2ft. x 3ft. 3in.  
 Further Particulars on request.



THE . . .

## "Lightning" Junior Fruit Grader

—Built Specially for You

It is no experiment, but the developed product of many years work, and the tested result of many hundreds of "Lightning" Graders in actual use.

It will pay you to inspect this before your season commences. Its principal features are:—**Cheap, Good, Accurate, Very Large Bins, Sound Construction, Simple to Operate.** Fitted with the "Lightning" Genuine Solid Rubber Roller.

Cash Price of Unit only, £23/10/-,  
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ing much needed advice in regard to health principles and the care of children, demonstrates some valuable economy devices, such as making slippers from old felt hats, and butter coolers from kerosene tins.

A lecture car is also provided, and daily in each district continuous series of lectures are given, of interest to all classes of the farming community. In addition, the Departmental officers (identified by large discs bearing their name and status) are in attendance in the cars, ready to answer questions about the exhibits and the individual problems of the settlers.

The train is deservedly popular, the attendance in some districts during the last tour reaching nearly 2,000; and the lectures given by Mr. H. A. Mullett, Superintendent of Agriculture, and other officers, were much appreciated.

In establishing the Better Farming Train, the Victorian Department of Agriculture, in conjunction with the Victorian Railways, has done a most useful work, and one well worthy of emulation in other States. It provides a means whereby the expert knowledge of the Department's officers may become of greater practical value to the man far outback.

## NITROGEN AND FRUIT-GROWING.

More nitrogen is now being used in Australia than ever before, and this has been due largely to the efforts that concerns with nitrogenous fertilisers to sell have been making to place their products with the agricultural and horticultural fraternity. While not altogether ignoring the claims made by the proprietors of well advertised lines, growers are taking to the small private experiment as a more sure means of knowing the real value of the nitrogenous manures submitted to them in the advertising pages of the agricultural and horticultural press. This is entirely as it should be, and the greater demand for nitrogen, particularly by fruitgrowers, suggests that some considerable (and economically sound)

virtues have been discovered in soluble nitrogen salts.

Good Australians naturally feel gratified that the chief nitrogenous fertiliser now being used is the locally produced sulphate of ammonia, and fortunately for Australian agriculture, in its various forms, present production of sulphate of ammonia in the gas works of the capital cities, and the steel works of the Broken Hill Proprietary Co., at Newcastle, is ample to meet immediate local requirements.

Where fruitgrowing is carried on with irrigation, the solubility of sulphate of ammonia is a factor of some importance, for when it is sometimes rather late for slower acting manures to be utilised, sulphate of ammonia can be assimilated by the trees in a minimum of time.

Many fruitgrowers have found, with Mr. E. Pritchard, of Cairnsfoot, Harcourt, that, with an adequate water supply at hand, application of sulphate of ammonia can be delayed for two months at least after the general application of super., securing such results that the use of nitrogen as sulphate is annually increasing. This is undoubtedly the clearly defined trend in fruitgrowing practices in Australia.



GIBBS, BRIGHT & CO.—See Page XIV

# **TOMATO WILT AND ITS PREVENTION.**

## **Dusting with Bordeaux Powder and Sulphur.**

**A**LTHOUGH it is only a few years since spotted wilt first appeared in Australia, it has now become the most destructive disease affecting the Tomato, and appears to be increasing both in extent and virulency. Last summer, in many districts it was responsible for the partial, and in some cases complete failure of the crop.

As a result of experiments, I am convinced that the

wilt can be controlled,

and probably entirely prevented by the following treatment.

Mix thoroughly one part of Bor-

deaux powder with five parts of fine sulphur, place in a piece of hessian and dust it well over the plants in warm weather.

The first application should be made when the plants are quite small, and repeated occasionally until about February. It is no use waiting until the plant becomes diseased, as the treatment is preventive, but if wilt makes its appearance, the affected shoots on leaves should be taken off and destroyed, and then the plants can be saved by dusting with the sulphur Bordeaux mixture.

The nature and origin of spotted wilt is at present a mystery, although some authorities consider it is caused by a bacillus, introduced by a small insect. If this theory is correct, the infection must take place during an early stage of growth.

Whatever may be the primary cause of the disease, it appears to be induced principally by extreme variations of temperature, and soil moisture.

Tomatoes raised from seed, sown direct in their permanent positions, have always proved more hardy and disease-resisting than those which have been transplanted, and owing to the stronger and more even development of their root system, require much less water during the summer. —A. B. Robin, Nuriootpa, South Australia, 17/9/26.

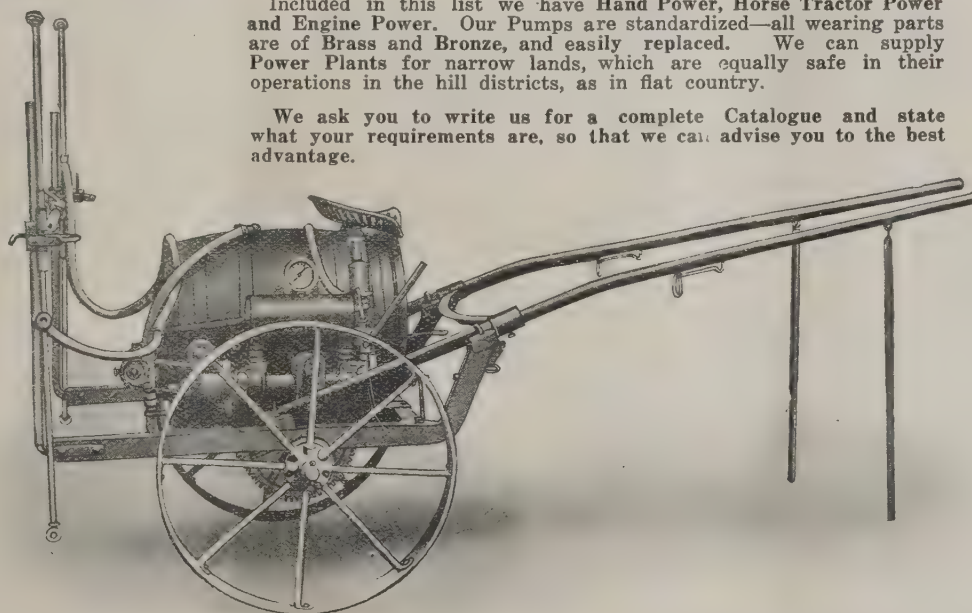
So long as there is work to do, there will be interruptions—breaks in its progress—and it is a part of one's character growth to bear these timely or untimely interruptions without any break in good temper or courtesy.

# **METTERS NUFREND SPRAYING OUTFITS**

We are taking this opportunity of introducing ourselves as makers of SPRAYING OUTFITS as an adjunct to our many other lines. WE HAVE A CATALOGUE OF SPRAY PLANTS which should fill any requirements in the VINEYARD or ORCHARD, also for the BLOWFLY PEST.

Included in this list we have Hand Power, Horse Tractor Power and Engine Power. Our Pumps are standardized—all wearing parts are of Brass and Bronze, and easily replaced. We can supply Power Plants for narrow lands, which are equally safe in their operations in the hill districts, as in flat country.

We ask you to write us for a complete Catalogue and state what your requirements are, so that we can advise you to the best advantage.



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## THE "Sunrayseed" Courier

### DRIED FRUIT INDUSTRY.

#### Exporting Currants at a Loss.

#### "Board of Control a Humbug."

Mr. W. J. Miller, of Mt. Lofty, South Australia, states his case strongly:—

The pre-war Currant grower is being dragged into exporting (under a heavy penalty) 65 per cent. of his Currants to an unpayable overseas market, or, alternatively, at a big loss to send them to a distillery simply because the various State Governments have flooded the industry with returned soldiers.

Cannot you see the humbug and futility of State Boards of Control? Have they, with all the prefulgent intellects of their Members been able to procure a price for Currants overseas that will pay the cost of production? Every ton exported spells a dead loss to the unhappy grower.

We need a bounty. The wine-makers got a big bounty (2/- a gallon).

Again, why harass the growers of S.A. and Victoria with Control Boards that regulate the tonnage we may sell in Australia, whilst N.S.W. and W.A. are free. These two States are laughing at us.

The actual state of affairs in the Dried Fruit Industry is deplorable. Who can see any daylight through the proposition that 65 per cent. shall be got rid of at a loss? Currants to-day are realising in London the cost of bringing them to the sweat boxes only. All charges thence to London. That is packing, grading, shipping to Australian seaboard, freight home, insurance, London charges, commission, etc., etc., represent a dead loss to growers.

Regarding Currants, the Secretary of the Commonwealth Dried Fruits Board (Mr. Marks) states that the export trade should be improved when trade develops with Canada as is confidently expected, especially with the Mackenzie King Government again in power. The Canadian-Australian trade treaty gives Australia

a preference of £14 a ton. The minimum prices for Currants fixed by the Board are £43 per ton (3-crown) and £41 (2-crown), c.i.f. and e main Canadian ports. This means that Mediterranean supplies would need to supply at £29 and £27 to be on the same basis as Australia.

There is also a preferential tariff with New Zealand of 2d. per lb., but so far this is not operating. Under a reciprocal arrangement for some N.Z. commodity to enter Australia the preference would then apply.

A better preferential arrangement with Great Britain was also hoped for. The duty was £7 per ton on Sultananas and £2 per ton on Currants from foreign countries, which was really no preference at all with regard to Australia.

Further, Turkey seemed now intent on developing continental markets with her dried fruits, thus leaving Australia a better chance of obtaining a satisfactory market in Great Britain.

### AMERICAN PRUNE PRODUCTION.

According to the California Prune and Apricot Growers' Association, there are over 190,000 acres of Prunes and 102,000 acres of Apricot trees in California, and the combined value of the crops in 1924 was over 21½ million dollars. The Prune industry has grown from an annual production of 90,000,000 lbs. in 1898 to 269,000,000 lbs. off 145,000 acres. When the balance of the 190,000 acres planted come into bearing, it is estimated the crop will be 400,000,000 lbs. annually.

Recent investigations give the cost of producing Prunes in California as 138½ dollars (approximately £27/10/-) per acre.

### 1926 GREEK CURRANT CROP ESTIMATES.

The American Attache at Athens supplies the following statistics on the 1926 Currant crop estimates:—  
Cultivated area—125,777 acres.  
1925 crop—300,133,050 pounds.

May 15 estimate of 1926 crop—269,630,450 pounds.

### A MARKET FOR DRIED FRUITS IN CHINA.

Speaking at the Cool Stores' Conference, held at Doncaster on August 31, Mr. H. Louey Pang, who has just returned from a visit to China, stated that there is a good market there for Australian dried fruits, particularly Sultananas.

During 1924 the value of dried fruits imported by China from all countries was £280,930. Of this, Australia contributed £818 worth. Australian fruit was excellent, the quality being the best seen there; but the price was higher than that of the Californian fruit, which sold for 5½d. per lb. c.i.f. Shanghai. The Australian Dried Fruits Board fixed the price at 6d. per lb. One American firm was said to turn over 80,000 dollars a year for Sultananas alone.

Mr. Pang suggested that it would be worth while for the Australian Government to subsidise shipments of dried fruits to China, so that they might be sold at the same price as the American for one or two years; then, when the people had realised the quality of the fruit, the price could be increased. It was necessary to take some such steps to capture the market, which would pay handsomely.

### DRIED FRUITS.

#### Suggested Control in Western Australia.

A deputation of vine growers from the Middle and Upper Swan and Caversham districts waited on the Minister for Agriculture (Mr. M. F. Troy) recently, asking for the introduction this session of a Bill to control the dried fruits industry in the State. The Minister promised to bring the matter before Cabinet.

To a second request for the establishment of a dried fruits experimental farm, the Minister said he was in agreement with the principle, and had discussed it with the Premier. Such a farm would be established, but the time and locality had not yet been determined. A deputa-



The "Eclair" Spraying Fruit Trees.

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## SPRAYING, LIMEWASHING AND DISINFECTING

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Before Placing Your Order ASK A FRIEND  
WHO HAS USED A

**VERMOREL "ECLAIR" SPRAYER**

— TO TELL YOU HIS OPINION OF IT — ACTUAL USE IS THE BEST TEST —

The types made include the following:—

HAND SPRAYERS  
PNEUMATIC HAND SPRAYERS  
KNAPSACK SPRAYERS  
PNEUMATIC KNAPSACK SPRAYERS  
BUCKET PUMPS

BUCKET SPRAYERS  
SINGLE WHEELED SPRAYERS  
TWO WHEELED SPRAYERS  
CART SPRAYERS  
AUTOMATIC HORSE DRAWN SPRAYERS

POWDER BELLOWS  
KNAPSACK POWDER  
SPRAYERS  
AUTOMATIC HORSE DRAWN  
POWDER SPRAYERS

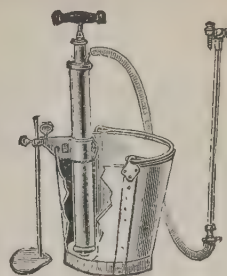
LIQUID CAPACITIES 1½ pints to 88 gallons.

PRICES FROM 4/- each.

The above types include machines for Spraying Trees, Bushes, Ground Crops, and for applying Limewash, Whitewash, Distemper, Waterpaint and Disinfectants

Ask your local Merchant for full particulars, or write for catalogue and leaflets to:—

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tion of fruitgrowers from the Toodyay district also asked for the establishment of an experimental vineyard, and the Minister promised that something of the kind would be undertaken.

### N.S.W. DRIED FRUIT.

#### Control of Marketing Sought.

Recently representations were made by a deputation representing growers of dried fruits on the Murray irrigation areas to meetings of growers throughout the Murrumbidgee (N.S.W.) irrigation areas. As a result the latter have adopted resolutions asking for the introduction of legislation in New South Wales to control the marketing of dried fruits, in conformity with the legislation in operation in Victoria and South Australia.

At a meeting of representatives of the Griffith, Yenda and Leeton sections it was decided unanimously that a poll be taken of dried fruit growers in New South Wales regarding the introduction of legislation controlling marketing, and expressing agreement with the proposal.

### SMYRNA RAISIN OUTPUT.

Official American returns indicate that the Smyrna Raisin crop of 1925 was 29,000 long tons. The new crop is unofficially estimated as 37,000 to 42,000 long tons. The 1925 Raisin crop was sold to the United Kingdom, 7,000 tons; North European countries, 14,000 tons; South European countries, 4,000 tons.

### CALIFORNIA'S GRAPE CROP.

#### Over Two Million Tons.

The California Co-operative Crop Reporting Service forecasts a total Grape crop for 1926 of 2,159,000 tons, as compared with 1,955,000 in 1925. In this total wine Grapes represent 418,000 tons, table Grapes 441,000 tons, and Raisin Grapes 1,300,000 tons. Deliveries of Grapes, it is expected, will be smaller than last year, when 75,777 car-loads were despatched fresh. The explanation advanced is that buyers are enquiring only for the highest quality Grapes, whether for "juice" or table purposes.

### SOUTH AFRICAN DRIED FRUITS PRODUCTION.

Production of dried fruits in South Africa is slowly increasing, and large acreages of young trees will shortly come into bearing. Local consumption of dried fruit is almost negligible, consequently practically the entire crop is available for export. For the quarter ended March 31, 1926, the following quantities were shipped from Cape Town:—

United Kingdom, 32,809 cases of 25 lb.; Australia, 1,058; Germany, 10; St. Helena, 16; West Coast of Africa, 12; East Coast of Africa, 76; total, 34,062.

### CROP PROSPECTS.

It is stated that prospects for the Sultana and Currant crops in the Mil-dura district are exceptionally good.

### SPANISH GRAPE CROP.

#### Heavily Reduced by Heat Wave.

It is reported that a heat wave has destroyed two-thirds of the Grape crop of Almeria (Spain). Consequently the exports from America to Great Britain are not likely to exceed 800,000 barrels, compared with the average of 2,000,000 barrels during recent years.

### MANCHESTER AS A PORT APPRECIATED BY AUSTRALIAN DELEGATION.

A visit to Manchester was recently paid by an Australian delegation consisting of Capt. W. F. Dunn, Minister for Agriculture in N.S.W., accompanied by Mr. T. H. McTiernan (Attorney-General), Mr. Geo. Valder, Mr. A. R. Hassan and Mr. H. Ellis. The party made an inspection of the ship canal and noted the splendid facilities for handling merchandise at the port of Manchester.

Capt. W. C. Bacon (Chairman Manchester Ship Canal Co.), presided at a complimentary luncheon tendered to the delegation, when the members of the Australian party made pointed references to the savings possible in freight and charges by shipping direct to Manchester.

"Read, not to contradict and to refute, not to believe and take for granted, but to weigh and consider."—Bacon.



# The Canning Industry

## THE CANNED FRUIT TRADE.

**A**N INTERESTING EXAMPLE of the way in which New Zealand and Australia are now supplying their own needs instead of looking to other countries, may be quoted in connection with the import of tinned fruit, a commodity that is very popular with housewives throughout both countries. A few years ago this trade went exclusively to America, Californian dessert fruit and Hawaiian Pineapples being the best on the market. A very small quantity of Australian and New Zealand-grown fruit was used, but the total amount was negligible by comparison with the quantity imported from America.

To-day the position is entirely reversed, states the "N.Z. Herald" Empire Trade Supplement. So greatly have New Zealand and Australia improved their methods of production and canning, that the American product has been almost wiped off the market.

"Where we used to import between 4,000 and 5,000 cases at the beginning of the season, we are importing barely 100 now," said the importer. "Australia's policy of massed production has won the day."

It is stated that if New Zealand had the same skill in manufacture, she could beat Australia and supply her own market. Apricots grown in the Central Otago district beat both the Californian and Australian fruit for flavor. Other fruits of

equally fine quality can be produced in other parts of the country. "A representative of a very large firm," it is further stated, "recently visited all parts of New Zealand in connection with a scheme to grow and can every kind of vegetable and fruit within the Dominion. Until sufficient high-grade dessert fruit can be grown in New Zealand, however, the bulk of our supplies will have to be procured from Australia."

"From the housewife's point of view, a bright, attractive label has a distinct selling value. Then, if it turns out to be a nice brand, she orders again."

Another important point mentioned by the importer was the advantage gained by the introduction of a reciprocal tariff between New Zealand and South Africa. All dried fruits from South Africa were now duty-free, whereas there was a duty of 2d. per lb. from Australia, and 4d. per lb. from the United States. The South African Peaches and Apricots were of very fine quality, particularly those from the Cape. Prunes from all countries entered New Zealand free of duty, as they could not be grown there.

## PINEAPPLE CANNING IN FIJI.

Experiments in canning Fiji Pineapples are being undertaken at Suva by a large firm of Canadian canners. The Suva correspondent of the "N.Z. Herald" wrote on August 27, that most of the machinery had been de-

livered and was being connected up. It was divided into two sections, one for treating the Pines and one (the machinery for which has been rented from the American Cannery) for making the cans, which arrive only seamed down the length and flat. A machine rounds them off again and supplies the ends. It was hoped to pack some million cans.

Latest reports from the country stated that the various plots of Pines scattered all over the colony were fast becoming ready for canning. They would be brought to Suva by boat, the longest trip not occupying more than, say, four days, so that the fruit would arrive at the factory in prime condition.

The American Cannery's expert will arrive by the Ventura on October 7 to find everything all ready for a start.

The success of these experiments as arranged between the Canadian Cannery and the Fiji Government will mean putting Fiji on its feet and quite independent of any outside markets or trade. It will therefore be seen that a very great deal depends upon the success of the trials.

Mr. Ellis, the Canadian expert here now, says that there can be no doubt of the ultimate success of the venture.

## FRUIT CANNING IN QUEENSLAND.

### Satisfactory Development and Big Future Prospects.

Canning matters in Queensland, while not comparable with the volume production of southern canneries, are in a most interesting stage, states Mr. A. S. Howcroft, of Tombs and

# Corkscrew Steel Fencing Posts

All previous defects associated with Iron Posts eliminated

## FIREPROOF. WHITE ANT PROOF.

Owing to the corkscrew construction of these Posts, they have a tremendous grip in the ground, and it is only necessary to drive them in 16 inches, in practically any kind of soil. We suggest using about a 5lb. hammer for the purpose. The Posts are bored to specification without extra charge. It is necessary to use the ordinary wooden strainers.

## THE MAIN FEATURES ARE:

**PERMANENCY.**—The Posts will last a lifetime, and will also ensure the Wire lasting a similar period.

**INDESTRUCTIBILITY.**—The Posts are unbreakable, and their flexibility and resiliency enable the fence to maintain its true position, even after being subjected to pressure. The fact that a single post will bend when not in the fence is not a detriment, but we claim it to be one of its greatest merits, as any other iron or steel post of somewhat similar size is liable to fracture when subjected to pressure, which is impossible with the Corkscrew Post. This Post when bent can just as easily be straightened again without injury to the post.

Obtainable from—

Sole Agents for N.S.W.—

The Commonwealth Wool & Produce Co. Ltd.

## CHEAPNESS OF RAIL TRANSPORT AND HAULAGE CHARGES.

The Posts are carried at the same rate as fencing wire on the railways, viz.: 2 tons or over, "A" Rate; 1 ton, "B" Rate; under 1 ton, 1st class. For a distance of, say, 300 miles, the rates would be:—

|                 |         |         |
|-----------------|---------|---------|
| "A" .....       | £2 7 6  | per ton |
| "B" .....       | £3 7 6  | "       |
| 1st Class ..... | £6 14 2 | "       |

At "A" Rate the cost per post would be approximately 1d. for the above distance. These posts can be despatched with wire netting and fencing wire to make up minimum quantities to save freight.

## CHEAPNESS AND QUICKNESS OF ERECTION.

The saving in this item will be found to be enormous.

## PRICES AND WEIGHTS:

5 feet, about 4½ lbs. (500 to ton), 1/6 each. 5 feet 6 inches, about 5 lbs. (450 to ton), 1/7½ each. F.O.R., Sydney. Longer Posts can also be supplied.

Station Supplies Department (1st Floor)  
3 Bent Street, SYDNEY

Howcroft, canning engineers, Melbourne. With its sub-tropical location, plus genuinely tropical country near at hand in the northern part of the State, Queensland is the canning State of to-morrow. It is true that it will probably never threaten the stone fruit business of the South, but with its Bananas, Pineapples, Citrus and berry crops available almost the entire calendar round, not to mention a profuse vegetable crop, the Northern State is in a most favorable position, and big development is certain. The drought that a section of the country is passing through at the moment is, of course, a temporary happening.

At present the Pineapple crop is the only one that is tackled seriously, of which the production is substantial. With this excellent fruit, such a poor traveller in its raw condition, there would appear to be a vastly increased field ahead of it. It is quite safe to say that the sales of canned Pineapple could be doubled or trebled by even the mildest advertising campaign. Practically no publicity work is given to its distribution in Victoria, at any rate. It is wonderful what the public will do if it is asked to nicely. Preserving practice in Queensland is admittedly not as advanced as it is in some of the huge production canneries of the South, but this is a phase that will be passed through, and then—watch Queensland.

#### **LABELLING OF CANNED FRUIT.**

At a meeting of the Northern Goulburn Valley Fruitgrowers' Association, held at Merrigum on July 2, the following resolutions submitted by the Australian Canning Fruit Association, were agreed to:—

That more stringent legislation be enacted to compel canners to truthfully label their goods and prevent the continuance of present frauds on the public.

That more generous provision be made to enable fruitgrowers to erect their own canneries and cool stores.

That the State Ministry be asked to establish an inquiry into the present anomalies of railway freight on canned fruits.

#### **EXPORT CANNED FRUITS.**

##### **A Satisfactory Opening.**

By the end of August, quite half this season's surplus pack of Australian canned fruit, which was sold to one of the large multiple firms in Great Britain had reached London,

The purchasers, who were invited to comment upon the quality of the fruit, intimated to the Minister for Markets and Migration (Mr. Paterson), that the consignments received had given every satisfaction, not one complaint having been made from their branches. Stocks at their warehouses had also been examined, and the cases were found to contain clean and sound tins, with labels generally in good condition.

#### **Export Control Proposals.**

The poll of all fruit canneries, under the Canned Fruits Export Control Act passed during the last session of the Commonwealth Parliament, to be held about the end of September, will determine whether the scheme contemplated shall be adopted.

The proposal is to create a board to control and regulate the export of Apricots, Pears, Clingstone Peaches and other fruits as prescribed by regulation. This Board will be similar in character to the Dried Fruits and Dairy Produce Boards.

#### **THE HAWAIIAN PINEAPPLE INDUSTRY.**

##### **Output 1,000,000 Cases Per Annum.**

A RECENT VISITOR to Honolulu, Mr. G. C. Boehme, of Dalgety and Co., was greatly impressed with the rapid development of the Pineapple industry there. In an interview published in the "Sydney Morning Herald," he stated that it is only 15 years since the canning of Pineapples commenced; now many thousands of acres are cultivated, chiefly on the island of Oahu, on which Honolulu is situated. The height of the season is July and August, although the fruit ripens in smaller quantities throughout the whole year.

The Hawaiian Company's factory in Honolulu covers an area of about 30 acres. It receives the fruit in its natural state at the cannery in railway trucks, each containing 10 tons of fruit. Generally there are about 35 trucks to a train. The Pines are graded before going into a machine which slices off the outer covering, and into other machines which cut the Pines to uniform sizes, and again slices these portions into suitable sizes for packing. The greatest care is used in selection of fruit for first grades, and the manufacturers are said to market more of this fruit than any other country. The output of

the Honolulu Company is about one million cases per annum. There are about 2,000 employees engaged in the cannery during the height of the season—mostly women and girls. With the exception of the mechanical part all the labor can easily be performed by females, who, while at work wear thin rubber gloves, so that not only are their hands protected, but the fruit is kept as free as possible from contamination.

The chief market is in America, and the tins can be designated according to the requirements of the buyer. Packing is got up in various sized tins, some round and some square, so as to suit the requirements of buyers, who cater for different trade requirements. A feature of this concern is that it grows nearly all the fruit that is canned. It finds that this is a more economical and more satisfactory way of dealing with the business.

#### **CANNING PEACHES.**

##### **Cost of Production in California.**

Under official supervision a number of growers of canning Peaches in Stanislaus County, California, kept cost-of-production records last season. When the records were summarised it was found that to pay the total labor charges, taxes and incidental costs at the average selling price for 1925, an orchard would have to produce 9.1 tons per acre. The average yield of full-bearing orchards reported on was two tons above that figure. The average yield in the county was 3.85 tons less than enough to pay all expenses. One orchard, which made the highest tonnage reported, averaged 23.67 tons of No. 1 fruit to the acre. The successful low-cost practices followed on the orchards obtaining the highest returns are being carefully studied by growers.

#### **EXPORT SUGAR REBATES.**

The Commonwealth and Queensland Governments have agreed to allow the Export Sugar Committee to determine the price of sugar contained in manufactured goods exported from Australia. The Committee met recently and fixed the export sugar rebates at £12/5/- a ton on fruit products, and £18/10/- a ton on all other goods. The lower rate on fruit products is due to the fact that sugar is supplied to manufacturers of such products for home consumption at £6/5/1 a ton less than to other manufacturers,



# Fruit Growing In New Zealand

## A Fast-Developing Industry

THE FRUIT INDUSTRY of New Zealand has not escaped the financial difficulties common to all producers since the war, but with the large consumption of fruit in the Dominions, the opening up of export trade in Apples, and signs of further extension of the fruit-preserving industry, growers have every reason for confidence in the future, says the "N.Z. Herald" Empire Trade Supplement.

Many districts are ideal for commercial fruitgrowing, the area under commercial orchards at the present time being about 22,000 acres, a large quantity of which has not yet reached maturity.

The main market overseas is Britain, and satisfactory transport is now available, practically the whole of the fruit landing in good condition. The growers' main anxiety is the marketing of their fruit, which reaches England during April, May and June, and comes into competition with late American Apples or foreign cool-stored fruit. In consequence the prices obtained have not always been satisfactory, and growers hope that the British Government will apply some degree of preference to British fruit during those months.

### Government Export Guarantee.

The New Zealand Government, which has done much to develop the industry through the Horticultural Division of the Department of Agriculture, is fostering the export trade by guaranteeing to the grower a return of one penny per pound net for all exported fruit; and although present appearances indicate that the Consolidated Fund will this year have to bear the cost of a fairly heavy adverse balance, the possibilities of the trade are sufficiently encouraging to justify this State aid.

The following table shows how the export trade has developed:—

|                       | 1923.   | 1924.   | 1925.   | 1926.   |
|-----------------------|---------|---------|---------|---------|
| Auckland . . . . .    | 792     | 845     | 9,497   | 56,680  |
| Poverty Bay . . . . . | —       | —       | —       | 6,986   |
| Hawkes' Bay . . . . . | 9,937   | 1,100   | 20,436  | 100,326 |
| Wairarapa . . . . .   | 8,343   | 6,031   | 3,937   | 10,156  |
| Marlborough . . . . . | 5,643   | 6,740   | 3,875   | 17,600  |
| Nelson . . . . .      | 94,800  | 186,412 | 158,639 | 457,935 |
| Canterbury . . . . .  | 490     | —       | 541     | 2,391   |
| Otago . . . . .       | 15,015  | 40,125  | 35,956  | 76,911  |
| Total . . . . .       | 135,020 | 241,253 | 232,881 | 728,985 |

The whole of the fruit export in 1926 was Apples, with the exception of 9,376 cases of Pears. Of the total, 390,294 cases went to London, 30,146 to Southampton, 28,897 to Hull, 216,507 to the West Coast ports of England, 61,180 to Montevideo, and a trial consignment of 12 cases to Genoa.

The Fruit Export Control Board, established under law, came into operation in March, 1923, up to which time the Fruitgrowers' Federation had supervised the export trade. This body continued in that capacity until the close of the 1925 season. The Board obtained from the Government a continuance of the guarantee of one penny a pound to the growers, over a much larger export than had ever been made, and with a view to improving the marketing of the fruit in Britain, sent Home its Chairman, Colonel C. Gray.

Brokers approved by the Board have been appointed to handle the fruit, but in addition to consignments to these quarters a total of 90,000 cases was shipped to the Board itself, distribution being in the hands of Colonel Gray, who disposed of most of it in Glasgow, Liverpool, Hull and Southampton.

### New Markets.

The activities of the Board are varied. They include the making of arrangements for pre-cooling facilities, the allotting of shipping space, and the hundred and one details of such an organisation. The question of finding new markets has engaged close attention. In regard to the South American market, experts were sent from the Argentine to investigate the rumored existence of fruit-fly in New Zealand, and on their being satisfied that this pest was not present, the Board was able to dispose of 60,000 cases in South America, prices being good. A recent return showed about 3d. per lb. net

for ordinary grades. The arrangement is, however, that any profits made over and above the guarantee in one market must be used to offset any loss in other markets. The South American market, it is considered, will not absorb much more than 60,000 cases annually.

The opportunity of testing other markets is limited, owing to lack of refrigerating space. The question of "opposite-season" trade with the Pacific Coast of the United States was receiving attention.

Following the example of the Meat Control Board, the Fruit Board will deliver single cases of Apples to any address in the United Kingdom on behalf of New Zealand residents, the chief purpose being to advertise the fruit.

During the arsenic scare, seeing the very small percentage of arsenic on New Zealand Apples, the Board undertook to indemnify purchasers against prosecutions.

The Canadian case has been generally adopted for export, and for next season there has been an importation of 600,000 cases.

An important gain to the industry has just been announced. As a result of the representations of the Board to the shipping companies, freight to the United Kingdom has been reduced from 4/- to 3/6 a case.

### NEW ZEALAND'S TRADE.

#### Australia Has a Large Share.

A special "Empire Trade" Supplement of the "New Zealand Herald," issued on September 7, states that the Dominion's imports for 1925 aggregated £52,456,407, the largest on record except the boom year of 1920. Exports totalled £55,243,047, thus exceeding imports by nearly £3,000,000. Australia took third place in value of both imports and exports, the former totalling £5,238,773, and the latter, £2,502,113.

A detailed analysis of the imports shows that Empire supplies totalled 73 per cent., Australia's share being 11.14 per cent.

Tinned fruit came mainly from Australia and other British countries, although the United States supplied Peaches to the value of £20,000. In dried fruits the South African Union sent the bulk of the Apricots, and Australia almost the whole of the remainder. Australia and Greece shared a £38,000 market for Currants. Asiatic Turkey supplied Dates to the value of £41,000, practically the whole import, and £12,000 out of £16,000 in Figs. The whole of the Prunes,

worth £24,000 came from the United States, and a £200,000 market for Raisins was practically divided between Australia with £113,000 and the United States with £79,000. It is believed that Australia ought to be able to capture the whole trade in Raisins by sound marketing.

An import of £19,000 worth of fresh Apples came entirely from Canada. The hope that, with opposite seasons, Canada and New Zealand might develop a mutual trade in Apples was not realised, for Canada bought less than £1,000 worth from this Dominion. A trade of £15,000 in Lemons, shared by Australia and Italy, is not nationally important, except as indicating the slow development of the local Lemon-growing industry, and the danger from foreign countries where apparently production costs are low. Tropical fruits—Bananas, Oranges, etc.—came from British countries, chiefly Australia and Fiji.

Australia took half the business in still wine, of a total value of £112,000, and South Africa did as well as any other country with £12,000.

### FIGHTING INSECT PESTS.

#### Looper Caterpillars.

The caterpillars of the Looper Moth are making their appearance. They destroy the fruit spurs, and when the Apples are small, attack them. One caterpillar will often eat several holes in every Apple on a bunch. They are most numerous in November. Looper caterpillars are so called because they have a habit of doubling the body up into a loop as they move. Spray with arsenate of lead.

#### Woolly Aphis Parasite (*Aphelinus mali*).

These parasites will be available to orchardists during this month. Applications for same should be sent to the Science Branch, Department of Agriculture, Flinders-street, Melbourne, or to the local orchard supervisors.

**Bryobia Mite, Codlin Moth, Woolly Aphids, Pear Leaf Blister Mite.**

See "Fruit World," September, 1926, p. 433.

#### Pear and Cherry Slug.

The adult is a glossy, black, four-winged insect about  $\frac{1}{2}$  inch in length. The larvae are dark olive green, slimy. They eat the upper surface of the leaf, causing the injured areas to turn brown. Badly infested trees appear scorched as if by fire. The larvae cut semi-circular holes in the upper surface of the leaves, and begin to feed. The entire green upper surface of the leaves is removed by the

larvae until only skeletons are left. Spray with arsenate of lead. Dust trees with lime, soot, or dry sand. **San Jose, Red, Black or Olive, Apple Mussel and Other Scales.**

The warm days have caused the young of the above-named scales to move from under the adult scales. Spraying with nicotine sprays should be carried out at once. Red oil could also be used.

#### Thrips.

Owing to the warm weather, these destructive insects have made their appearance in fair numbers. As the flowers of fruit trees are soon opened or opening, it is advisable to spray with benzole emulsion 1 in 5, nicotine sulphate or black-leaf 40.

Gibson and Ross, of Canada, have found that a spray made by the following formula, is effective against thrips:—

- 2 tablespoonful Paris green.
- 2 lbs. brown sugar.
- 3 gallons water.

#### Caterpillars.

Caterpillars of Painted Apple Moth, Light-brown Apple Moth, Orange Butterfly, and other well-known orchard pests, are now making their appearance. When noticed, spraying with arsenate of lead should be commenced, as some of these caterpillars are very destructive to the fruit spurs of fruit trees.

### HURRICANE IN U.S.A.

#### Loss of Life and Property in Florida.

#### Fruit Crops Affected.

Great sympathy will be felt for all sufferers in the devastating hurricane which swept through Florida on September 20. The loss of life was appalling. It is estimated there are over 1,000 dead and 5,000 injured, and that the loss of property exceeds £20,000,000.

Great damage was done to the flourishing orchards and Citrus groves.

### Classified Advertisements.

#### Wanted and For Sale.

Prices for Advertisements under this heading are as follows:—

Casual Advertisements, one to six words, 2d. per word. Contract Advertisements, twelve months, 1½d. per word.

#### ORCHARD FOR SALE.

35 acres.—An ideal property. Peaches, Pears, Apples, Lemons; two large dams, pumping plant, house and implements.—William F. Zelius, Leeds Road, Doncaster. Phone 360 Box Hill.

## New Zealand is an Important Market for Australian Fruit.

### Ship Your Oranges, Lemons, Grapes to New Zealand



All consignments for this market will have careful attention and realize highest prices if sent to

#### The Co-operative Fruitgrowers of Otago Limited, Dunedin

Personal supervision of every consignment.

Cheques posted promptly.

Drop us a Line or Cable  
"Peachbloom," Dunedin.

### SHIP TO AUCKLAND, N.Z.

Consign to the Up-to-date  
and Established Firm of

### TURNERS & GROWERS — LTD. —

City Markets, Auckland  
New Zealand.

Salesrooms comprise—

55,000 ft. of FLOOR SPACE,  
including  
FRUIT COOL STORAGE ON  
PREMISES.

Staff of nearly 100 Employees  
Competent Salesmen only  
employed.

HIGHEST PRICES  
PROMPT RETURNS.

CABLE ADDRESS: "Cantab"  
P.O. Box 439.

BANKERS: Bank of New  
South Wales, AUCKLAND.



# Western Australia.

New Markets :: Export Control Opposed :: News and Notes

## BRIDGETOWN FRUITGROWERS' ASSOCIATION.

### Proposed Local Organisation Bill.

### Federal Export Control Opposed.

The monthly meeting of the Association was held on August 27, Rev. F. Davis (President) presiding. There were also present Messrs. Arkle, Sparks, Simmons, Hill (2), Flintoff, Abbotts, Taylor, Ozanne, Willmott, Green, Miss Champ and Mr. A. S. Lowe (Hon. Sec.).

The Chairman stated that the cheap rate applying to carriage of fertilisers over the railways applied during the whole of the year in the S.W., and not over a period of a few months as many settlers believed. Mr. Willmott supported this view.

### Organisation Bill.

The President gave a detailed report of the conference of fruitgrowers held in Perth to discuss the proposed Organisation Bill (particulars of which have already appeared in the "Fruit World"). After meeting the Minister for Agriculture (Mr. Troy), the proposed Bill was drawn up, and was left to Mr. R. S. Sampson, M.L.A., and Mr. Moore (who is attached to the Parliamentary staff) to put the Bill in shape. Copies were sent out and immediately Mr. A. T. Booth (Mt. Barker), received his copy he rang him (the President), stating that an alteration had been made of the boundaries that had been fixed by the conference and suggesting that immediate action be taken to have the boundaries placed in the Bill as agreed to by conference. He had given his support to this action being taken. The Bill would be known as the W.A. Fruit Industries Organisation Board.

Mr. E. E. Hill considered the Bill, if passed, would be a wonderful thing for fruitgrowers. There was only one matter he took exception to and he was the only one to vote against it, and that was introduced by Mr. Sampson, "That consideration be given to the control of fruit." This was entirely wrong as the Bill provided in one of the clauses "That the Board shall be non-commercial and non-political."

Mr. A. S. Lowe asked what would be the position if the proposed Commonwealth Bill went through the House,

Mr. F. E. S. Willmott said that if the Commonwealth Bill went through it would not affect the fruit trade within the State, but would affect every case exported. The proposed Federal Bill was simply a marketing Bill and the desire to make growers send the fruit just where the controlling body thought fit. The fruit would not go where the grower wished.

The President: If we can get our Bill through the House we will be in a position to fight the Federal measure.

Mr. Willmott: The proposed Commonwealth Bill is simply a Bill to pool fruit.

Messrs. Willmott and Ozanne moved that the Bill agreed to by the Perth conference be agreed to, the motion

**SWANN & Co.**  
Established 1822.

A century's experience in handling  
**FRUIT OF ALL DESCRIPTIONS**

All Consignments for U.K. will have  
Personal Supervision and Attention

Account Sales and Cheques despatched immediately after sale.

**3 SALTER'S HALL COURT,  
London, E.C., England**

Cables:—FIREBRICKS, LONDON  
Bankers:—Bank of England.

Australian Representative  
Chas. E. Howship, 129 Queen-st.,  
Melbourne, and Surrey Chambers,  
Perth, W.A.

Victorian Agent: H. M. Wade &  
Co., 471 Flinders Lane, Melb.

being carried unanimously.

The President's action in joining Mr. Booth to have the boundaries altered, as agreed to by conference, was endorsed.

A vote of thanks was tendered the President and Messrs. Willmott, Lake and Hill for attending the conference as representatives of the Bridgetown branch.

Major Whittell was proposed and elected a member of the Association. —"Blackwood Times."

### NEW MARKETS FOR PERTH.

A Bill was brought before the W.A. Legislative Assembly early in September for the establishment of public markets in the Perth municipality. In explaining the Government's proposals the Minister for Agriculture (Mr. M. F. Troy), said

a trust of five members would be appointed, the producers, the consumers, and the Perth City Council, each having one representative, and two members, one of whom would be Chairman, appointed by the Government. The trust would have power to establish and maintain markets in the Perth municipality for the sale of vegetables, fruit, meat, fish, poultry, eggs, butter, dairy produce, grain, straw, chaff, hay, and other products and provisions.

Kerbstone markets would be limited to retail selling only. Perth was the only city in the Commonwealth without marketing facilities, and the Minister hoped there would be no opposition to the Bill.

## FRUITGROWERS' RESEARCH COMMITTEE.

### Storage of "Dunn's" Apples.

Good work is being done by the Research Committee of the Mount Barker (W.A.) Fruitgrowers' Association, which met on September 3, when a report from Mr. Percy Burston covering his observations of fruit in the local cool store was read. His reference to "Dunn's" is of immediate interest to fruitgrowers, says the "Western Mail."

Mr. Burston states:—"I find this variety (Dunn's) in some instances very susceptible to scald. I have studied this scald for several seasons past, and the conclusion I have come to is that the fruit gathered from trees which are having their off season (with respect to crop) will not stand storing, and I have strongly urged growers for some seasons past not to attempt to store this class of fruit. The class of fruit I refer to is of a whitish color when on the trees. I have come across this fruit in some cases intermixed with greenish fruit, and the latter showed no sign of scald. I would strongly urge that the whitish variety of Dunn's be kept separate, and that it should not be cool stored."

The Committee decided to push on with the project of securing an experimental block. Various spraying and manuring experiments were allotted to members. It was decided to circularise interested fruitgrowers asking them to note their results from spraying on a tabulated form. Mr. A. C. Vaughan, Government Orchard Inspector, assured the Committee that his department was sympathetic with their efforts, and that he was ready to assist them wherever possible. Mr. Vaughan is keeping in close touch with all experiments made.



Schloesing's Mixture has been in use in Europe for about 30 years, and has the advantage of doing away with the large amount of labour necessary in preparing the ordinary Bordeaux Mixture. It does away with the necessity for—

1. A stock mixture of Bluestone.
2. A supply of lime milk.
3. Mixing the two in proper proportions.
4. Testing with paper for acidity, etc., as it is slightly alkaline.
5. Straining, as there is no grit in the material.

Do not add anything for "Sticking" purposes, THE MIXTURE WILL "STICK" ITSELF.

SCHLOESING'S READY MIXED

## BORDEAUX SPRAY MIXTURE

(Guaranteed to Contain from 50 to 56 per cent. Copper Sulphate)

An Absolute Preventive for Downy Mildew of the Vine, Curly Leaf and Brown Rot of the Peach, Shot Hole of the Apricot, and Cure for Black Spot of the Vine, Apple and Pear, Blue Mould on Oranges, Sleepy Sickness of Tomato (Tomato Wilt), Mildew on Roses, Black Spot on Carnations (if sprayed as spots crack), and other Fungus Diseases.

Schloesing's Mixture has achieved remarkable success in N.Z. and Tasmania, where large quantities of it are used.

Many testimonials have been given as to its efficacy, and above all, it is the ease with which it is used which recommends it to growers.

Cygnets, Tas., 10th April, 1926.

I have used your Spray Powder for Black Spot, and can highly recommend it as it has given me every satisfaction.

I have given your traveller an order for 2 c/s for next season.

Yours truly, (Sgd.) I. D. WYLIE.

Dear Sirs,— Cradock, Tas., 27th March, 1926.

Please order for me 2 c/s of the Schloesing's Bordeaux for Black Spot.

I used it last season, and found it to be quite as efficacious as the old Bordeaux Mixture, and much more easily mixed.

Yours truly, (Sgd.) JOHN BRYCE.

Sole Agent for Victoria:

**LAWFORDS FRUIT EXCHANGE**

Pty. Ltd.

::

**DONCASTER**

Vic.

### WESTERN AUSTRALIAN WINE.

Recent messages from Perth state that arrangements had been made for Western Australia's first big shipment of wine to London. Mr. B. W. Bagenal, representing Messrs. W. W. Pranel and Co., the large exporters of Australian wine, bought 20,000 gallons from the Valencia cellars. The consignment was to be shipped in three parcels, the first to leave on September 20, under the Country Act.

At the recent Primary Producers' Conference, exception was taken to the practice of wealthy Eastern States' wine firms buying licensed wine saloons and tying the houses. The State's annual consumption of wine was stated to be 500,000 gallons, and the local production 232,000 gallons, much of which had to be exported owing to the fact that the Eastern States firms were swamping the local market. The progress of the industry was thus being retarded. South Australia, which produced 10,500,000 gallons annually, practically dumped its wine into Western Australia.

A resolution was carried, recommending that at least one-fifth of the sales made by wine saloon licensees should be of the wines of the State

in which the licence was granted, and that licenses should be granted only on that condition.

### W.A. TOMATO EXPORTS.

Tomato exports from Western Australia to the Eastern States last season were worth over £20,000. To improve cultural methods and varieties, the Minister for Agriculture (Mr. M. F. Troy) will establish experimental plots in the Geraldton and Northampton districts, the chief sources.—"Western Mail."

All weeds are a nuisance that ought to be cut

Before they have gone to seed.  
Our roads would look better and  
fence corners, too,  
If everyone swatted the weed.



GIBBS, BRIGHT & CO.—See Page XIV

### REJUVENATION OF OLD PEACH TREES.

In some orchards, where Peach trees have become somewhat stagnant, the growth poor and fruit small, and where the trees have lost practically all the lateral growth on the lower portions of the limbs, it is advisable to give a hard cutting back in order to stimulate new growth from which new leaders may be formed. If satisfactory results are to be achieved the tree must, of course, have a good root system, and healthy butt and limbs: it is impossible to get the best results from cutting back Peach trees which are sick as a result of attack by armillaria or white ants or any other such cause. The cutting back should be done just before the trees start to make growth in the spring, the limbs being removed about 3 or 4 feet up from the crown. By removing the limbs close to the crown a big cut is made, exposing a large surface which will not heal up satisfactorily, and decay will generally set in soon after the cutting is done. Severance higher up the limb means that the cut is smaller, and that a greater length of the old limb is left from which new shoots may develop.—N.S.W. Dept. of Agriculture.



## NITROGEN FOR GARDENS, FARMS, AND ORCHARDS.

A Talk by W. B. Edwards.

(Broadcast by Station 5CL, Adelaide,  
August 31, 1926.)

It is many years since that great scientist, Sir William Crooks, said that the future of agriculture was bound up in the question of available nitrogen, and if the consumption of nitrogenous fertilisers in countries of dense population, and consequent intensive cultivation, is any indication, then Sir William Crooks was on the right track. What, however, does his statement mean to Australia, where nitrogen is assigned to a relatively unimportant place in agriculture and horticulture—fundamentally the same thing? We must not imagine that though plant life, in say France or Belgium, or perhaps Java or Japan, demands an artificial application of nitrogen, similar plant life in Australia is differently constituted, and in consequence has no need for nitrogen. All plants require nitrogen. The matters of soil, climate, cultivation, and nature of the plant all have a bearing on whether it can secure its own supplies, or whether they should be applied in the form of artificial fertilisers.

The air we breathe is four-fifths nitrogen, yet, though plants use their leaves for breathing purposes, they are unable to use this means of obtaining the whole of their nitrogen supplies, which mainly enter the plant through the roots. Fortunate plants, like the Beans and Peas—the leguminous plants—are able to obtain their own nitrogen from the air, and store it in the little nodules on their roots—easily discernible if you pull up a Bean plant and examine it. That is one of the reasons why applications of nitrogenous fertilisers are not so necessary to pod-bearing crops, and also why Beans and Peas are so frequently grown for turning into the soil again as green manure. In the language of the chemist, the legumes can “fix” their own nitrogen.

Nitrogen, if it is to be delivered to the plant through the roots must be in liquid form. It must be made soluble, and this applies equally to all other plant foods. Therefore we apply the water from the tap in the garden or the irrigation channel, or else Nature does the job for us. We say that we are watering the plants, but this is scarcely so. We are really feeding them—making their food soluble so that they can absorb it.

To digress for a moment—this suggests that what we regard as sterile

lands are really not sterile at all, though they are probably low in certain elements of fertility. Their trouble is caused through low rainfall, which does not enable the dormant plant foods to be taken up by the plant life that is all the time making strenuous attempts to grow. One saw in Egypt, evidence of this, for in the winter of 1915-16 we experienced quite unusual rain, and about the horse lines where oats and grain generally had been spilt, a crop was beginning to sprout. Coming nearer home, what changes have been wrought in our dry lands in the North by the application of irrigation water, for irrigation is nothing more than the process of making certain non-available, though existent plant foods, available for the crops. Water is the great solvent of everything.

Talk to the Australian Wheat farmer, and he will perhaps tell you that his Wheat doesn't need nitrogen. He can grow good crops of Wheat without it. He doesn't really mean what he says. He means that he doesn't have to apply nitrogenous fertilisers to his crops, but believe me, the nitrogen is needed all the same. The European Wheat grower, who is compelled to get some sort of a crop each year off his land, knows how much Wheat needs nitrogen. But in our kindly Australian climate—how kindly we scarcely appreciate—conditions are highly favorable for the nitrifying soil bacteria to work, and in the process of continuous fallowing, or cultivation during the time the Wheat land is not carrying a crop, the restoration of the nitrogen taken away in the preceding crop, takes place. And although nitrogen is quickly lost from the soil—is the hardest element of fertility to retain in it—and in older countries of more intensive cultivation, requires annual replenishment, the low rainfall in the Australian Wheat areas tends to conserve it, or at any rate to allow it to dissipate itself more slowly, as of course, it does all plant foods except phosphoric acid, of which there is a natural deficiency in all Australian soils, hence the wide popularity of superphosphate.

How can one tell whether a plant needs nitrogen? Listless, anaemic plants, with yellow drooping leaves are a pretty sure indication that for some reason nitrogen is lacking. A healthy growth and dark green foliage, and a general air of robustness, are equally certain signs that the plant is plentifully supplied with nitrogen. Ask the market gardener, whose load of deep green succulent-looking Cabbages catches your eye, what he has done to give them their

attractive appearance, and he will probably reply that he has used ammonia, for that is what the market gardening fraternity invariably calls nitrogen, though, of course, they use other forms of nitrogen than the ammonia (or more correctly sulphate of ammonia) form. The promotion of stem and leaf growth is the function of nitrogen in agriculture. In those vegetables which are specially cultivated for their leaves, and where a tender, quick growth is of such importance, as in the Cabbage, Lettuce, Cauliflower, Spinach and Silver Beet, nitrogen exerts a wonderful influence, or in the tuberous growths like the Potato, or the root crops like Turnips, Carrots, Parsnips and Beet, which generally occupy the ground a long time, applications of nitrogenous fertilisers are always beneficial. One cannot have a good growth under the ground unless there is a profuse—not too profuse growth—above it, for the leaves are the plant's lungs. One might just as well expect a child with weak lungs to grow into a strong healthy man, as expect a miserably-leaved plant to produce a good root.

Vines, berry canes, and fruit trees that are annually pruned, will not set good crops of fruit if they are unable to make a proper wood growth, and any fruit tree or vine or berry plant that sets its fruit on new wood will respond to applications of nitrogen. This has been proved time and again with the Grape vine, the Loganberry, the Peach, and practically all forms of orchard or vineyard growth. The Passion Fruit, too, always shows favorable returns from nitrogen. Strawberries also profit from its application. Nowhere, perhaps has nitrogen shown its value better than in the Murray River Settlements, where dried fruit and Citrus are the principal crops grown.

I have referred to intensive cultivation demanding greatest quantities of nitrogen, and of how densely populated countries were its chief users. Well, our market gardeners, orchardists and home gardeners—all intense cultivators—are Australia's biggest users of nitrogenous manures. As soon as the market gardener has taken off one crop, in goes another, and even an exceptionally rich soil will not long stand that. Much the same thing happens in the average suburban home garden, where what the seedsman calls a succession of bloom demands a similar programme. The summer blooms make way for the autumn display, and the autumn display gives way to winter, and winter-flowering plants are removed to make room for spring flowers—continuous cultivation with a vengeance,

and one that demands liberal fertilisation. This is a rich field for nitrogenous fertilisers to augment other sources of fertiliser supply, but it is one in which I fear, the true value of nitrogen is appreciated only by the relatively few.

The advantage of liberal application of nitrogen to lawns is well known, but on flowers it is advisable, in order to get best blooms to apply nitrogenous manures in small doses, at intervals, rather than in one liberal application.

Those of us who have given a thought to it, must have often wondered how Germany managed to survive such a lengthy period of warfare, with only internal food resources to draw on. Confirming Sir William Crook's pronouncement, the secret of her success was her ability to provide her own nitrogen supplies, not only for the destructive needs of warfare, but also for the peaceful arts of agriculture. The mighty strides

farmers in their particular sphere. But Australian farming is young, and is mostly carried on, on an extensive rather than an intensive scale. Area is depended on for the yield necessary to support the farmer and his family. Sooner or later it will not be so, for the yield per acre will be the aim, and the area cultivated will lose its significance. But wherever a farmer has to produce a crop of some description every year from a small acreage, he will gradually turn to nitrogenous fertilisers to enrich his present means of fertilisation. The men in the van of agricultural progress, of course, are those who are constantly experimenting on their own farms, and orchards and gardens, to see what every new idea is worth—to test its application to their own soils, climates and crops. These are the men, who, while their neighbors claim in times of low prices, that they cannot afford to fertilise, say that they cannot afford not to fertilise.

Australia is fortunately placed in regard to supplies of nitrogenous manures, on present rates of consumption, for her gas and steel industries provide her with a tonnage of sulphate of ammonia equal to all the local demands that have yet been made upon it. It is perhaps a curious thought, but every time one uses gas or purchases an article made of Australian steel, one is unconsciously giving Australian agriculture a lift along. Every ton of coal burned in a grate or boiler represents the waste of enough sulphate of ammonia to fertilise the average suburban garden for 12 months, besides throwing away other valuable by-products. Every ton of coal coked in the steel works or in the gas works represents a saving, and it this contribution to Australian agriculture in the carbonisation of coal in the coke ovens of the steel works, or the retorts of the gas works, that forces under our notice the fact that the conservation of Australia's coal stocks is largely in the hands of these two industries.

To return, in conclusion, to the value of nitrogen artificially applied to all cultivated plants, let me say that a small experiment with any good nitrogenous fertiliser is worth all the talking in the world, and if I have given you some incentive to go ahead and try a little nitrogen out on your garden, farm, or orchard, then I have not only done you a good turn, but have helped to strengthen the backbone of our country—the primary producer—and have put in a good word for two Australian industries, one very essential to our personal comfort, the other to our prosperity as a nation.

## Queensland Notes

(By our Correspondent)

THE DRY CONDITIONS which have prevailed in most districts are reflected in the appearance of the trees, particularly citrus, amongst which both growth and flowering are backward. Bananas also show the effect of insufficient moisture, and low temperatures experienced in the winter months. Southern tablelands have been more favoured, beneficial rains having been recorded. Though the growth of Pineapples is more profuse under the influence of humidity, it is at the expense of the quality of the fruit, which shows a decided improvement under fairly dry conditions. This applies to various other tropical fruits, particularly the Mango, which even refuses to "set" its fruit when the flowering season is attended by showery weather.

The citrus season is about completed, and for good quality fruit prices have been satisfactorily maintained: inferior lines have been difficult to place at any price. Undoubtedly the grossly immature supplies marketed in the early season exercised a baneful influence on second quality fruit, and but for the irrefutable evidence so persistently provided, it would appear incredible that means were essential to protect one section of the growers from the influences attributable to the exercise of another section. Maturity standards have been gazetted for various fruits, and it is hoped that their appreciation or otherwise will not be considered as "a matter of policy."

Our principal fruit, the Banana, has for some time been much in the limelight. The Committee of Direction of Fruit Marketing, desirous of securing a monopoly of the marketing, fell heavily over legal impediments, and now, in addition to the general agents, another institution is operating which prompts the suggestion that marketing is a more lucrative proposition than production.

Whether production will be increased or even maintained is a matter of rather grave concern at the present. The advent of beetle borer, leaf spot, and bunchy top, particularly the latter, readily admit of the practical elimination of the industry. One cannot compliment the authorities on their initiative in respect of the former. Certainly an entomologist was appointed some four or five years since to investigate the borer aspect, the facilities provided being such as accorded by the usual laboratory. He cannot command a single Banana stool nor an inch of land upon which

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Germany has made in the utilisation of the nitrogen of the atmosphere for purposes of soil fertilisation, are evidenced by the fact that in 1913 she imported Chilean nitrates to the extent of three quarters of a million tons. To-day she imports no nitrates, but after providing for her own enormous requirements, is able to export a large surplus. Knowing this, we feel that German agriculture is on a stable footing, even if her currency is not so favorably placed.

Australia's present low consumption of nitrogen does not necessarily imply that our farmers are not progressive. On the contrary, Australia should be proud of what has been done, particularly in scientifically producing Wheat on areas of low rainfall, and, I think that we can fairly claim that what the Danes have done in dairy farming under such unfavorable conditions, has been equalled by the work of our Victorian Wheat





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to include one. What can be accomplished, when the means are available was well demonstrated by the Bunchy-top Commission, but unfortunately the Chairman, Professor Goddard in his present investigation of the fruit affection known as "squinter" is privileged to participate in the entomologist's difficulties.

Whether advantage will be taken of the information gained and recommendations made by the Commission regarding the control of bunchy-top may be a matter for conjecture, but procedure, both past and present fails to suggest it. It is reported that an inspection has been made, whereby the extent of infestation has been located, also clean areas from whence suckers for planting may be obtained; but what measures, it may be asked, are being taken or proposed regarding infested areas. It may appear sufficient to ministerial or permanent heads of Departments, with

of bunchy-top, aided and abetted by the passiveness of a benign State Department.

Admitted that the various experts on such matters have repeatedly urged the supervision and cleaning up of town gardens, but with no avail. The owner of a town plot may read of his country cousin being fined for permitting fallen fruit to remain beneath the trees, whilst administrators of the law decree that the town dweller shall remain free from prosecution and continue to provide a bounteous supply of pests and diseases whereby the efforts of the legitimate producer shall be nullified.

#### A LETTER FROM QUEENSLAND.

##### Grower Defends the Committee of Direction.

(To the Editor, "Fruit World.")

Sir,—I have before me the August copy of the "Fruit World," a journal distributed throughout every State in the Commonwealth, and also well-known overseas.

There is a long letter in the Queensland section of the journal, written by one Sam Johnson, to which I, as a fruitgrower of Queensland, take strong exception.

This man, who is surely making a nice little fortune out of the grower (he is a middle man), is "kicking over the traces" because the business-like growers are speedily linking up through their organisation—the Committee of Direction—with a view to obtaining a payable price for their product, and the stabilising of their industry. Seeing that growers themselves have full control over the organisation (the members of the Committee are essentially bona fide fruit-growers), and may withdraw their representatives at any time if not satisfied, there is not the slightest need for Sam Johnson to interfere with their business at all. We growers in Queensland treat him more or less as a joke, but his "kicks" are apt to put our affairs in another light when read by our brother-growers in the Southern States or overseas—hence this letter. He's putting up a number of stunts nowadays, but growers generally are awake to him.

I would like to state, Mr. Editor, that, as Mr. Johnson is not a grower but a middleman, the reasons for his attacks on our organisation are obvious. Should any of your readers desire any information as to what we are doing, I would invite them to write to the Committee itself, Turbot Street, Brisbane, when I am sure the Manager, or any member of the Committee, will gladly enlighten

them with true facts, not dope. Our second annual report and balance sheet have just been published, and contain many items of solid progress—copies of this may also be had on application.

No organisation was ever commenced that did not have some mistake occur in the earlier days. The Committee has overcome this element, and is using every endeavor to avoid future misunderstandings, besides fighting the opposition, which we term "vested interests."

The Banana growers, through their grower representatives, can see their objective in sight, owing to organisation, notwithstanding the fact that a few outside still continue to heed the wily Sam Johnson. The Pineapple growers, through their grower representatives, know their industry is fast becoming stabilised.

The Strawberry growers also state they are on the best footing they have experienced for many years past, through effective management and organisation.

In fact all sections are at work in a business-like way, and the fruit industry generally in Queensland, I venture to say, will soon be one big solid union of growers, properly managed, and capable of doing all its own business, without the "assistance" of any more Sam Johnsons.

The concluding paragraph of his letter will tell you plainly that he is a "silent" leader of this so-called "League of Freedom." Their numbers are comparatively few, but they too, will soon learn that they are on the wrong track—we must all be in together.

Now, Mr. Editor, I would again ask your many readers not to rely too much on Sam Johnson's most unfair attack on our organisation, for the reasons I have stated above. Let them enquire, and all information will be cheerfully submitted. Why this man should go to a southern and overseas journal to carry on his unfair attacks, is beyond me, but we are prepared to defend and fight wherever he goes. In saying this I am quite confident of the backing of all the properly organised growers in Queensland, and they are well in the majority.

WILL KITCHIN.

"Wantirna," Nambour, Queensland,  
14/9/26.

Eloping Bride: "Here's a telegram from father!"

Bridegroom: "There! I knew he'd come round. What does the old chap say?"

"Do not come home and all will be forgiven."

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little appreciation and apparently less concern to treat such matters with levity, irrespective of the consequences.

#### Fruit Fly.

It is well known amongst fruit-growers that the Brisbane private gardens in which more or less diseased fruit trees are freely included, are annually responsible for the propagation without hindrance of sufficient fruit flies to stock, not only Queensland but the southern hemisphere. Very many of these gardens contain Bananas, amongst them several known to have been infested with bunchy-top; and should the same indifference attach to this malady as applied to fruit fly, also beetle borer, the present Banana-grower would be well advised to also join the array of sellers—not of Bananas, because they will have expired by the agency





## CALIFORNIA CITRUS INDUSTRY.

### Mr. Katekar's Report.

(Continued from p. 427, September issue.)

#### Orange Drinks.

An important factor in increasing the sales of Oranges and Lemons has been a campaign to promote the use of orangeade and lemonade at soda fountains. Not much headway was made in this campaign before the perfection of the Sunkist electric juice extractor in 1922. There are now 31,000 of these in use, and it is calculated that each one represents on a conservative estimate a case of Oranges a week, or 1,400,000 cases in the course of a year. The increasing popularity of these fruit drinks is shown by the fact that 7,000 extractors were sold in the 1924-25 season, and 4,522 between November 1, 1925, and June 1, 1926.

#### General Conclusions.

As already stated, I am satisfied that we can learn a great deal from the field and packing-house practice of the Californian Orange growers. The work of the Fruit Growers' Ex-

change, in conjunction with the Agricultural Department, demonstrates to what extent research work can assist production.

I am satisfied that the consumption of Oranges in Australia can be increased to such an extent as to remove all fear of over-production for a long time to come. The United States and Canada, with a population of 120,000,000, consume approximately 40,000,000 70 pound cases of Oranges a year, equal to over 53,000,000 of our bushel cases. Our climate is much more conducive to Orange consumption than is that of most of the United States and Canada, and we have a market practically bare of other fruit in the early spring, at a time when enormous quantities of early fruits and of canteloupes are being distributed throughout America from the Imperial Valley and the hotter regions of Lower California. American

#### methods of advertising

and of pushing the sales of Citrus fruits will repay a careful study. By such means the American consumption of Oranges was increased from 28 million boxes in 1921 to 43 million in 1924.

Especially is there a big field for developing the sale of Orange drinks. Good work in this connection has been done by the Spencer Street stall of the Victorian Railways Department, but a great deal more remains to be done.

#### Suggestions.

In conclusion, Mr. Katekar made some valuable suggestions, based upon his experience. He pointed out that Californian growers had only achieved their present sound position by sticking together and appointing business men at the head of affairs. In the early days of their organisation, many of the schemes had proved unworkable and impracticable, and were abandoned; to-day the organisa-

tion was as near perfection as it was possible to get.

That being the case, we could with confidence follow their lead, avoiding their failures and emulating their successes.

Mr. Katekar stated that in making his recommendations he had not overlooked the differences in population and acreage concerned of the two countries, but an effort should be made to follow as closely as possible the Californian methods. He said:—  
**A Federal Citrus Growers' Exchange.**

My first suggestion is that steps should be at once taken to form a Federal Citrus Growers' Exchange with headquarters in Melbourne; such Exchange to consist of a representative from each Citrus Association at present in existence in the three States, viz., New South Wales Central Citrus Association, the Victorian Central Citrus Association, Torrens Valley and Salisbury Association and Murray Citrus Growers' Association; representation also to be given to any associations coming into existence in the future.

The function of the Exchange in

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Copy of the annual report, which was adopted at the annual meeting of the V.C.A., on September 24, has just come to hand, too late for inclusion in this issue.



## IMPORTANT CITRUS DEVELOPMENT.

Citrus By-products are Being Successfully Manufactured at Gosford, N.S.W.

"Jusfrute" Ltd. is Showing Steady Progress.

Valuable Opportunity for Growers.

**M**UCH credit is due to the promoters of the enterprise now being carried on at Gosford, N.S.W., in the extraction of juices and oils from Citrus fruits—an enterprise which began in a small way, but which, by reason of its soundness and vigor has developed into a flourishing concern. Sheer pluck won through in the difficult initial stages.

The Manager-Director, Capt. G. I.

Adcock, has had sound botanical and scientific training. This, combined with mechanical skill and capacity for organisation, enabled him to put into operation in Australia the experiences he had gained in essential oil extraction in France and Italy, after the war.

Capt. Adcock has around him a team of Diggers who not only built the "Jusfrute" factory themselves but also installed the machinery. The local orchardists, some of whom were sceptical at first, soon rallied up, for here was the opportunity of turning the skin-blemished or second-grade Oranges to profitable account. Then other orchardists learned of the increasing success of this enterprising company, with the result that Jusfrute factory now handles a considerable portion of the Citrus crop of N.S.W.

During 1924-5, 54,500 lbs. (or over 24 tons), of Jusfrute essences were used.

Jusfrute essences are sold to selected aerated water manufacturers throughout Australia and New Zealand. More than 230 firms are now bottling Jusfrute essences in aerated water form.

Australian fruit, just from the orchards, is used in the manufacture of Jusfrute. The consumption of fruit by the factory has greatly increased as the following figures will show:—

|                   | 1924.  | 1925.  |
|-------------------|--------|--------|
| Bushels.          |        |        |
| Lemons . . . . .  | 19,132 | 24,415 |
| Oranges . . . . . | 4,128  | 7,456  |

The production of lemon juice for the period 1924-5 was 8,400 gallons.

The financial position is equally satisfactory. Deducting the amounts used for research, the company shows a profit of 13 per cent. on its capital.

In order to keep pace with the developing business and to go in for other related lines—candied peel, perfumes, etc., new capital is sought, and growers are invited to give this matter favorable attention.

15,000 shares at £1 each are offered, carrying 9 per cent. preference (payable 2/6 on application, 2/6 on allotment, and the balance in calls of not more than 2/6 per share per month); and 15,000 ordinary shares (payable 2/- on application, 2/- on allotment, and the balance at not more than 1/- per share per month.)

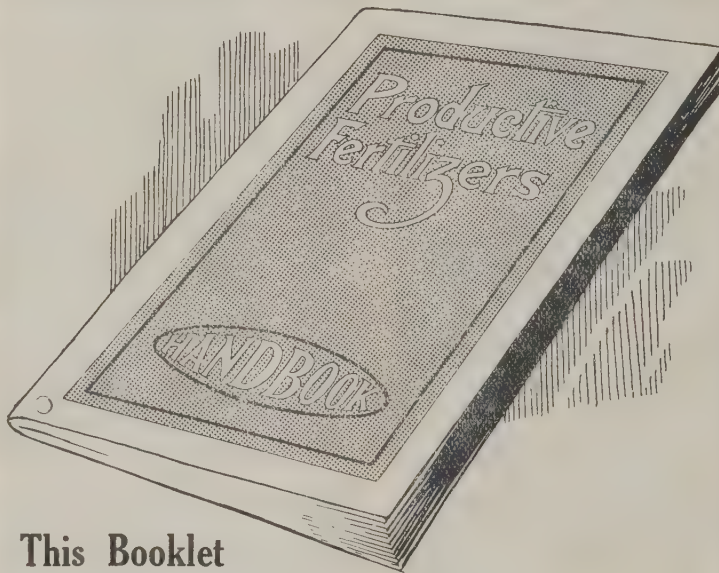
The company confidently looks to the growers to apply for shares for two reasons: (1) It is a profitable investment; and (2) it provides the means of absorbing much fruit locally and of exporting the products.

The directors are Messrs. W. M. Fleming, ex-M.H.R. (Chairman), F. R. Archbold, W. E. Kirkness, and W. L. Marcroft.

Prospectus is obtainable free on application, from Mr. W. M. Fleming, 25 O'Connell Street, Sydney.

## STATE SUGAR MILLS.

The Queensland Government has decided not to operate the State Sugar Mills at Gin Gin, North Eton, and Mt. Bauple Central next season, under the cane price conditions now existing, and has given notice accordingly under the Cane Prices Act. The Premier (Mr. McCormack) stated it was determined that the mill losses would not be met out of consolidated revenue. He considered, however, that the three mills in question would not remain closed next year, but that arrangements would be made by growers to carry them on as co-operative concerns.



## This Booklet

which was compiled primarily to advertise

## SULPHATE OF AMMONIA

gives a wealth of information concerning fertilisers generally, and its circulation has helped considerably in the education of the orchardist to a better-paying fertiliser practice. Many copies have been circulated to students of agriculture and horticulture throughout the Commonwealth and New Zealand, and some significance must be attached to the greatly increased sales of Sulphate of Ammonia since its publication

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## Tasmanian Notes

**T**HE SEASON PROMISES to be an exceptionally early one; the winter has proved one of the mildest on record, and very few frosts have been experienced.

In Northern districts the rainfall is above the average, and at present conditions have been against the early performance of cultural operations. In the South somewhat drier conditions have prevailed. Here cultivation is well advanced, whilst every opportunity has been available for the application of the "Dormant" sprays.

**Apple and Pear Shipments**  
to Interstate markets to date, total 1,200,000 cases. Advice received from the cold stores show that the total quantity of fruit now held does not exceed 160,000 cases. This, however, must be supplemented by the fruit which is still held by growers under ordinary storage in the packing sheds, viz.:—Sturmern, Croftons, Tasma and Rokewood, which should bring the total to at least 225,000.

The overseas exports this season

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ORANGES, BANANAS, PINES and  
all other fruits.**

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reached approximately 2,100,000 cases, so the total crop marketed, with local supplies will be in the region of 3,700,000 cases.

**Export Control Overseas Shipments.**

This matter was brought before the annual Fruitgrowers' Conferences and received the support of a large majority of the fruitgrowers attending.

Owing to opposition encountered upon the mainland to the proposals in the Bill, the Commonwealth Government decided not to take any action this season to bring it before Parliament, and such is now deferred until next session. This means that any measure that is agreed to, can-

not be put into effect until the 1928 season.

At a recent meeting of the Fruit Advisory Board, after a consideration of the foregoing factors, it was decided to endeavor to put the principal proposals into effect next season, such being applicable to Tasmanian consignments only.

From the commencement of the movement toward control, certain of the large exporting agents have been insistent that all the benefits could be obtained by a similar control on a voluntary basis. An opportunity has been given to the exporting agents to put forward the scheme that is recommended for possible adoption next season. This would form a practical demonstration of its possible merits or disabilities.

**Assistance to Fruitgrowers.**

After definitely refusing to grant the request for assistance in respect to the serious losses experienced by growers exporting Apples overseas during the 1926 season, owing to the general strike which occurred when the bulk of the fruit was arriving upon the markets, the Federal Government has now offered to make an amount of £25,000 available for necessitous cases, as a loan, free of interest for three years, providing the State Government supplements this with a like amount, and acts in the capacity of guarantor for repayments.

This "generous offer" well merited the forceful reply which was cabled in answer, viz.:—"That the export of fruit overseas was a Commonwealth responsibility; that genuine assistance was requested in what might be termed a State calamity, which was due to no fault of the producer; that the "generous" Commonwealth offer really amounted to £4,500, being only the interest on the money advanced; that the State Government was prepared to loan the Federal Government £50,000 on like terms, providing it was supplemented with another £50,000."

In the meantime bounties are being paid to other industries, protective tariffs provided to manufacturers almost for the asking—the affirmed policy being to "Encourage new industries." Surely the claims of the established industries deserve the same consideration, and it is questionable whether the better policy is not to first assist these to continue over bad seasons caused by abnormal conditions rather than lavishly pursue others which may prove to be chimeras.

**Marketing of Fruit, 1927 Season.**

Although it is early in the season to forecast the proportion of fruit crops that will be forwarded to the different markets, it is evident that a much larger percentage will be distributed amongst the mainland ports than in former years.

The more one examines the different conditions at present ruling in the Australian Apple industry, the more it is evident that our problems of marketing can only be solved by tackling them from a national viewpoint. Individual action in this respect can only give a temporary relief, and the sooner a move is made with the objective of Federal co-operation in this most important branch of our Fruit Industry, the sooner will some measure of stability be assured to the individual producer.

**Imperial Preference.**

This subject has received a good deal of consideration during recent years, and a number of suggestions have been put forward to give effect to the principle. The general opinion is that "Trade Slogans" embodying the principles of "Imperial Preference" need to be supplemented by

**HAMBURG  
(GERMANY).**

**Ph. Astheimer  
And Sohn,**

**Fruit Brokers . .  
and Auctioneers  
(GERMANY)  
Established 1863.**

**Largest receivers of Australian,  
Tasmanian, and American  
APPLES.**

**Foreign Apples a Speciality.**

something more tangible.

A further representation was made to the Prime Minister by the Fruit Advisory Board on the eve of his departure for England, and an intimation has been received that the subject of a preferential tariff of 5/- per cwt. on Apples will again be brought before the Imperial Conference in London.

**Tasmanian Fruit Act.**

The new Bill which is being introduced by the State Government to centralise the control of fruit inspection and other essentials in the Department of Agriculture, has been brought before the House of Assem-



bly and passed through the third reading.

A good deal of opposition is being encountered from the Municipal Councils who are loath to allow the control to go out of their hands, and incidentally do not want to lose the revenue that was derived from such source.

The more progressive grower welcomes the innovation, especially as opportunity will be given under the new plan of organisation to carry out field demonstration plots, packing instruction and assistance in other problems.

The measure was fully supported by the Annual Conferences of Tasmanian fruitgrowers.

#### Frost Injury.

A very severe frost was experienced throughout Southern Tasmania on September 15.

## J. G. MUMFORD

(Established 1906)

### Fruit & Vegetable Salesman

Account Sales Posted Daily

### APPLE EXPORTER

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MELBOURNE

Reference—Satisfied Growers in all States

The Apricot crop suffered to a large extent, especially those areas situated in the Bridgewater, Glenorchy and Bagdad districts, in many instances, especially upon the low-lying areas a total loss being recorded.

This is unfortunate, and will only make the general position of the industry more acute, as many of the growers already have to face losses on their Apple exports, and were looking to the Apricot crops to materially assist them.

Apples, Pears, Cherries and other fruits were not sufficiently developed to suffer injury.

"Well, well," he exclaimed, as he tackled her first meat-pie, "where did you get this?"

"I made that out of Mrs. Shorter's cookery book," replied the young wife. "It's a—"

"Ah!" he broke in. "This leathery part is the binding I suppose?"

## ORCHARD OPERATIONS.

October.

(By P. H. Thomas, State Fruit Expert.)

### Cultivation.

CULTIVATION should now be well advanced, the surface soil being brought to a suitable tilth and maintained in such condition until the end of the growing season.

In many orchards, constant ploughing to the trees has been responsible for the formation of soil ridges. This is undesirable and an effort should be made to level the surface soil throughout the area. Orchard trees that are situated upon such ridges tend to develop a surface rooting habit; moreover, the loss of moisture through evaporation during the summer months is greater than where level culture is practised.

Throughout the early spring months the trees require every assistance available, in order to set and develop their fruits. The main essential is sufficient moisture. Proper cultivation, intelligently applied, will materially assist to provide this. After a good rain, as soon as the soil condition permits, it is desirable to stir the surface to prevent a crust forming, and to conserve the moisture supplied for the trees' future requirements.

### Manuring.

Practically all fertilisers used to improve the coming crops should now be applied. In late districts, quick acting manures such as nitrate of soda, sulphate of ammonia, and sulphate and muriate of potash may be disced in to the soil during the early part of the month.

Manuring tests which have been conducted emphasise the desirability of early application, if full benefits are to be obtained during the current season. This is especially necessary in the drier districts.

### Spraying.

From the commencement of the month, fruitgrowers will be busily engaged in applying the "pink" spray applications to control possible black spot infestation. Wherever possible the different varieties of Pears and Apples should be treated as they reach the correct stage (i.e., when the individual blossom buds have separated from the cluster). Bordeaux 4-4-40 is advisable for use upon the hard skinned and susceptible kinds, such as Sturmer, French Crab, Cleopatra and all Pear varieties except Josephine. For those which are inclined to be tender the proportions of

copper sulphate and lime should be reduced one half, or lime sulphur 1-35 (33 deg. Beaume) substituted.

Peaches and Cherries which are affected by aphids should receive an extra application of nicotine sulphate if the pest has not been entirely controlled by early sprays.

### Grafting.

Re-working of unprofitable Apple and Pear varieties may be carried out during the early part of the month, as long as the scions have not commenced to make growth.

In order to prolong the period of operation, they should be stored in a dark cellar, being covered with a moist bag. This will retard their development and keep them dormant for two or three weeks longer than if kept in the open.

In some cases, the grafts, when in-

## To Orchardists

Send for Prices of the

## "Bave-U" Sprayer

to

E. ROBINSON

333 George St., SYDNEY

serted in position, remain dormant for a considerable period before coming into growth. Operators should not be too ready to decide that the work has been unsuccessful owing to this reason. As long as the bark remains firm and no shrivelling takes place there is a chance of development. When it is definitely decided that a "miss" has occurred, it is advisable to maintain one or two shoots of the old variety at the head of the limb for "budding" purposes in February or March.

## MEMORIAL TO MR. CHAFFEY.

At a meeting held at Renmark during July, it was decided to open a subscription list with a view to erecting a memorial to the late Mr. W. B. Chaffey, C.M.G. The meeting considered that the most suitable memorial would be a stone column with a light on it, placed in some suitable spot in the town. The Committee dealing with the proposal includes Messrs. H. B. Ogilvy, T. E. Prior, H. S. Taylor and F. M. Cutlack, who will welcome suggestions from those interested.

## South Australia.

### BERRI DISTILLERY.

The first payment on the 1926 vintage was made to growers by the Berri Distillery during August. The cheques represented a payment of £1 per ton, and, as announced at the recent meeting of shareholders, this will be followed by £2 per ton at the end of September and a further £1 about a month later. The disbursements will aggregate approximately £45,000.

### RENMARK FRUITGROWERS' CO-OPERATED.

THE ANNUAL MEETING of the Renmark Fruitgrowers Co-operated, was held on September 1, when a highly satisfactory report and balance sheet were presented. The Manager (Mr. E. N. Seary) gave figures of the returns for 1925 harvest. They were a little unfortunate with Muscatels; stone fruits were practically all cleaned up; they still had some low-grade Pears of 1925 in stock, but the bulk of this year's crop had been sold.

#### Bonus Shares Allotted.

Acting on the Committee's recommendation the members disposed of the surplus of £5,972/7/4 by allotting bonus shares of £2 a ton on all fruit delivered, provided £1,300 for bad and doubtful debts, and carried forward £178/7/4. The rate of interest on capital was fixed at 8 per cent.

Messrs. W. G. Cuttle, C. H. Katekar, H. S. Pike and L. Pitt were elected to the Committee, and Mr. H. G. Evans was returned unopposed as Auditor.

#### Best Fruit Prizes.

Prizes were awarded as follows:—The cup donated by Messrs. Gibbs, Bright and Co., for the best vine fruit of any two varieties, not less than eight tons (to be won three times,

and carrying also a cash prize of £2/2/-), Mr. S. Seekamp, who had no Currants below 3-crown; cash prizes of £2/2/- each, Messrs. R. Goddard (hot-dipped Sultanas), A. Robson (cold-dipped, all 4-crown), Bert Roper (Currants, all 4b. and 3a.), G. Kubank (Apricots, also close in Sultanas), Fred Craker (Pears), G. Nichols (Lexias and Walthams, also good Sultanas).

#### The Annual Report.

The annual report stated that the total pack for the year was 2,247 tons, made up as follows:—Sultanas, 1,076 tons; Currants, 986 tons; Lexias, 48 tons; Apricots, 87 tons; Peaches, 10 tons; Pears, 36 tons; Prunes, 4 tons. Owing to the large quantities of Gordos and Lexias sent to the distillery there was a considerable falling off in the pack of Lexias, but the total pack was only 65 tons behind the previous year. A determined effort had been made to raise the standard of their "Ark" brand fruits so that buyers could operate in this line with confidence. This improvement had been effected in all their fruits, particularly in the Currants, and the London house of Messrs. Gibbs, Bright and Co., had reported "We are glad to say there is practically no variation in the samples of various marks, which is a very satisfactory feature. The absence of variation is a great improvement over previous years and should be a matter of congratulation for packers of Renmark fruit." The criticism of the Sultanas was not so eulogistic, although a large number of parcels had received very favorable comment.

Trading showed an increase of over £2,000 in turnover. Improvements were installed during the year in their method of handling fruit in the shed.

The balance sheet disclosed a considerable improvement in their position. Advances made by the Society to growers had decreased by £14,438

during the financial year, and packing advances against unrealised fruit by £11,809. That, in conjunction with their steadily increasing capital and earlier sales, had permitted their liability to their selling agents to be reduced by £30,000 during the year. Their account with Messrs. Gibbs, Bright and Co. now stood at £38,617, and they had unsold stocks of fruit on their hands valued at £65,214.

The shareholders now numbered 330, an increase of 63 during the year. —"Murray Pioneer."

#### Pear Trees.

H. M. Jones, Stanthorpe, Queensland, writes:—I have a block of well-grown eight-year-old W.B.C. Pears, but a proportion of the fruit suffers from black end, i.e.: the calyx portion goes black and texture is hard. How would this stock respond if Apples were grafted on to them, and would the Jonathan have its normal color and growth?

Answer (by J. M. Ward, Vic. Supt. of Horticulture):—In reply to Mr. Jones' enquiry, I would not under any circumstances recommend grafting over Pear trees to Apples in a commercial orchard.

#### Value of Wood Ashes.

"S.B.J.", Shepparton East, writes:—Can you please inform me if wood ash is of any value for its potash contents, after it has been exposed to the weather for a number of years. Also what other properties does it contain.

Answer (by J. M. Ward, Supt. of Horticulture):—Wood ash is valuable to apply to the soil for its potash contents. The fact of its being exposed to the weather does not materially affect its value. There are very little other mineral properties contained in wood ash. The ash of hardwoods contains more potash than softwoods.

## ANOTHER PEST ELIMINATED

No present day Orchardist expects to keep his fruit trees alive and in full bearing unless he can keep down, by spraying with poisonous liquids, the thousand and one insect pests, fungoid growths, and other similar evils to which his trees are always subject.

Just as your trees are attacked, so is all your steel and ironwork, which forms the largest part of tools and implements you buy.

The cancer of rust will eat all your plant unless it is ZINC SPRAYED BY THE SCHOOP METAL SPRAY PROCESS.

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## THE BEST GUIDE IS THE SUCCESS OF OTHERS

**T**HE most independent of us rely, to a much larger extent, too, than we would perhaps admit, upon the experience—success or failure—of others.

In poultry raising there is perhaps a wider scope and a freer interchange of experience than is generally met with in other walks of life. This fact is borne out every day by the ever-increasing number of poultry farmers and “back-yarders” who freely relate their successes with the use of Karswood Poultry Spice (which contains dried and ground insects). What better index or guide in the matter of egg production is there than the plan adopted by thousands of successful poultry raisers throughout Australia.

Such a consensus of opinion, embracing, as it does, every state, every kind of weather, and almost every breed of fowl, must convince. It is the most definite and reliable source of information possible, and the greatest assurance that a prospective poultry farmer can have. Poultry are now giving of their best, but to enable them to maintain a regular supply of eggs right up to Christmas you need to do what these thousands of Karswood users are doing—feed with Karswood now. The cost of Karswood, too, is negligible, being a half-penny a day for twelve birds.

### FROM 4 TO 17 EGGS A DAY.

Dear Sirs,—

I received the Spice safely, and I am very pleased that you sent it along so early, because I was nearly out. You desire to know the results that I have obtained from the use

of the Spice. I am only a new beginner. I have 30 hens fit to lay now. Before I got your Spice I only got four eggs, and sometimes two a day. Since the use of the Spice I have the result of 17 eggs a day.

(Signed) H. C. ROSE.

Webb's Creek.

### NEVER A DAY WITHOUT EGGS.

Gentlemen,—

Kindly forward as soon as possible 2lbs. of Karswood Poultry Spice, for which I enclose postal note for 5/6, as payment, including postage.

Although I have not many full-grown hens, ever since June 20th, I have never been one day without eggs, which fact I attribute to the constant use of “Karswood” Poultry Spice since that date.

I also find it excellent in promoting the growth of young chickens.

Wishing you every success.

Yours respectfully,

(Signed) HENRY THORPE.

“Trigalong,” Eauabalong, via Condobolin, Lachlan River, N.S.W.

### SUPPLIES.

Karswood Poultry Spice is obtainable from all stores and poultry food suppliers at the following standard prices:— $\frac{1}{2}$ lb. packets, 1/-; 1lb. packets, 2/-; 7lb. tin, 13/-; 14lb. tin, 25/-; 28lb. tin, 48/-.

If your local dealer cannot supply you, write direct to Messrs Henry Berry & Coy. Pty. Ltd., 568-80 Collins Street, Melbourne, adding postage (6d. on  $\frac{1}{2}$ lb. packets and 9d. on 1lb. packets) to the above prices.

## LAYING OUT A POULTRY PEN.

## Useful Hints.

Following are some points given by the N.S.W. Department of Agriculture in the selection of a site:—

1. A northern or north-eastern aspect is the best.
2. Give preference to high ground with a gentle slope, not too much exposed to south-west winds.
3. Secure good surface drainage, and avoid seepage at the foot of hills.
4. Give preference to sandy soils as against those of clay formation.
5. Avoid flats and gullies.
6. Rocky positions will be found troublesome in the matter of erecting fences and laying out the farm generally.
7. Give preference to land in its virgin state over that which has been cultivated.
8. Remember that adequate provision of water is a very important factor.

## HANDLING A FOWL.

There is probably nothing at which the beginner is so inept as the correct way of handling a fowl. Whether he intends to exhibit or not, there is only one way—the right one—of carrying, or holding, or handling a bird generally. I will endeavor to explain how this should be done.

First and foremost the poultryman has to avoid fluttering and struggling, and in order to do so it is essential that the bird should be made to face him before picking it up. Grasp firmly with the thumbs over the wing shoulders, and the fingers round the sides, and lift. The bird is powerless to get away or flap its wings.

When carrying a fowl, slip the hand and forearm along under its breast-bone until you can get a firm hold of both the thighs between your fingers. Then raise it and tuck it comfortably away beneath your arm, keeping it in place with your elbow, so that the wings and head are in a normal position, the latter, of course, facing the way from which you are coming. With a little practice you can easily carry two birds at a time in this way, but never under any circumstances try to carry more than this number.

If you want to examine under-color or flights, stand with your left foot raised on a chair, or something similar, grasp the bird by both hocks firmly in the right hand, so that your fingers are uppermost; then lay her across your left leg on the breast-bone, and you will be able to make your examination. Never allow wing flapping.—“Garden and Field.”

## “APTO” TABLE POULTRY TALKS.

With an inward knowledge of these markets extending well towards 30 years, we cannot remember a better winter period than the four weeks now being reviewed, especially so when we examine sales of hens and cockerels. It was previously mentioned as a possibility, that hens might ease, but fortunately values improved, mainly in sympathy with a distinct far-reaching shortage in Cockerels. White Leghorn hens now stand at round about 7/- per pair, and for colored sorts of quality, from 10/- to 12/- per pair. We naturally hold no brief for any particular breed of hens. Granting, for the sake of argument, the superiority of White Leghorns as egg producers, one wonders how many extra dozens of eggs the Whites must needs lay in order to make a profit equal to the difference mentioned when hens are finally sold. If, as is generally stated, culling of a most severe nature has this year been indulged in, and at least some proportion of real good layers has reached the poulterer's bench, hens, under the approaching influence of Christmas needs, may well continue to command big money.

Cockerels are scarce, and destined to continue so, and granting dear feed and all the rest of it, we need much more convincing that orchardists—leaving the expensive track of bran, pollard and grain, and making real use of such feeds as orchards produce—cannot breed cockerels to show quite a satisfactory profit. In

the meantime hundreds upon hundreds of pairs of chickens—poussins—small griller birds are clearing weekly at say from 1/- to 2/6 pair.

Muscovy ducks from 9/6 to 10/- must be considered as comfortably dear, but drakes at about 16/- pair do not overwhelm salesmen with congratulations from producers. Neither do English sorts based on 10/- show much of a profit. We cannot help thinking that Indian Runners, partially left to their own devices in the matter of food, would prove alike helpful and a source of profit on most farms. At the moment, old Indian Runners, quite good enough for rough breeding, are worth from 5/6 while young stuff for table purposes, run from 6/- to 7/6 pair.

The Turkey season is now finishing up, quantity and quality alike failing fast.

## “APTO” Sale Prices Realised.

Chicks, 6d. to 10½d. each; poussins, 1/2 to 3/6; grillers, 4/- to 8/6; W.L. cockerels, 9/- to 13/6; colored cockerels, small, 9/6 to 11/-; medium, 11/6 to 13/-; heavy, 13/6 to 18/-; W.L. hens, 6/- to 8/-; colored hens, light, 6/6 to 7/6; medium, 8/- to 9/6; heavy, 10/- to 12/-; roosters, W.L., 4/- to 5/11; roosters, colored, 4/- to 9/8; Muscovy ducks, 9/- to 10/3; old Muscovy ducks, 6/- to 7/11; Muscovy drakes, 13/- to 16/6; English, 10/-, 10/1; Indian Runners, 7/- to 8/1; turkey gobblers, 33/6 to 54/6; turkey hens, 17/6 to 34/6. (All prices at per pair.)—“APTO” report, 13/9/26.

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## MURIATE OF POTASH.

### Its Increasing Popularity.

ITHIN the last few years a remarkable swing in public opinion in regard to the respective values of muriate and sulphate of potash has taken place. Thus, muriate (chloride) of potash is now used, taking the world as a whole, in vastly greater quantity than is sulphate. The modern appreciation of muriate has been slower in reaching Australia than it was in arriving in America, for instance, yet it is certainly here now.

Experiments carried out by Nobbe, an American investigator, point clearly to the conclusion that the chloride (muriate) forms of fertilising elements are of great value in the formation of sugar, and Professor Schneidewind, a noted German authority, has gone further in showing that muriate of potash very obviously exceeds sulphate of potash in its beneficial action on the diastatic properties so valuable in the production of high quality fruit and Grapes, etc.

It was due to systematic propaganda that sulphate became more popular than muriate in this country, but it is interesting to note that very little sulphate, as compared with the various chloride (muriate) forms, is used in Germany. Very naturally, she wishes to sell the dearer, and yet less potassically rich form, to outside customers, whilst relying on the chloride, or muriate form for home consumption.

Official German figures published by the Imperial Institute of Great Britain in 1922, quoted the allocation

for home (German) consumption in 1919 of the different forms. These figures quoted the "actual potash" (K2O) content in metric tons, and were:—

Chloride forms (i.e.,  
muriate forms) . . . . 301,500 tons  
Sulphate forms . . . . . 9,280 "

In round figures, in English tons of the potash as marketed, that would indicate that for her own use Germany that year was satisfied with 20,000 tons of sulphate, but retained 500,000 tons of the salts in the muriate or chloride form.

America, as has been said, prefers the muriate form, and for the year ending April, 1926, imported only 67,136 short tons of sulphate, as against 822,530 short tons of chloride forms—approximately a quarter of which consisted of the concentrated muriate form now coming into favor here.

But, if muriate had not been made available to the Australian and New Zealand fruitgrower, at a distinctly lower price than sulphate—which it still is—it might not so rapidly have tended to displace sulphate in popular favor as it has done.

### ATOMOL DUSTS LIMITED.

One of the most interesting developments of recent years has been the increase in the dusting method for combating insect and fungus diseases of plant life. Atomol Dusts Limited, of Adelaide, is really an embodiment of a movement for the practical application of scientific discoveries in

the realm of plant life to every day use. The company desires to render service to fruit, vine and vegetable growers—not the service which merely supplies an order on a given date, but personal investigation of their practical problems, and the fulfilment of requirements in accordance with the highest standards of scientific research.

Atomol Dusts Limited emphasises that dusting is not an experiment, although its works and laboratory have been equipped to assist in research work; and doubtless as time goes on materials which the growers have not been acquainted with will be produced. At the present juncture the company does not intend to depart from those materials which have proved to be efficacious. The active ingredients contained in all the company's dusts will be those which the grower has been using for many years, but with this difference:—In spraying, water has been the agent by which various chemicals have been conveyed to the plant, while with dusting, the atmosphere is used for that purpose.

The company has dusts available for controlling insect pests of Apple and pear trees, vines, Tomatoes, Potatoes, as well as vegetable dusts, dormant dusts, Citron dusting powder, tobacco dusting powder, mildew dusts, Cherry slug dusting powder and Lucerne dusts. A pamphlet on the dusting method and prices for dusting powders will be supplied free on application to Atomol Dusts Limited, Dumphries Place, off Gilles Street, Adelaide, S.A.



Fruchthof-Bremen

## Fruchthandel Gesellschaft Scipio & Fischer

Fruchthof BREMEN Germany

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### AUSTRALIAN REPRESENTATIVES:

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West Aust.: Messrs. Paterson & Co., Ltd., Perth.

South Aust.: Messrs. Geo. Selth & McRae Ltd., Adelaide.

Tasmania: Messrs. E. R. Cottier & Co., Hobart.

# AT THE ROYAL SHOW

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*Riding Spring Tooth Cultivator with Forecarriage*

## Riding Spring Tooth Cultivator with Forecarriage

The whole Machine is constructed on a good, sound basis, the jumps or floats are hinged strongly to the main frame, and are held down with pressure springs. The main fastening bolts are double nutted, which eliminates all side lash. The wheels are supplied with renewable boxes and axles, the lever is situated in front of the driver, is easily controlled, and is low down out of the way of the limbs.

## "HARVEY" Patent Spring Tooth Orchard Cultivator

One Horse  
7 and 9 Tynes

This Cultivator is the only implement on the market that can be worked with one horse, that will work bodily over right to the butts of the largest trees. The lever is low set, and has nothing projecting to damage the branches.

These Spring Tooth Cultivators stand out on their own. They have no rival for orchard work; require no holding; you simply set the steering disc—the machines do the rest. All the ground is cultivated. No strips left unworked.



*Spring Tooth Cultivator at work—Note Cultivators work right to trunk of tree whilst the horse is clear of the branches*

**"NO ORCHARDIST SHOULD BE WITHOUT IT."**

In regard to the nine-tyne Spring Tooth Cultivator recently forwarded, I consider it to be an implement that no Orchardist should be without. It is the handiest thing on the place.

(Sgd.) S. H. SMITH, Beaconsfield, Vic.

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AGENTS ALL STATES



# The Fruit Trade

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### TRADE SLACK IN ENGLAND.

#### Effect of the Strikes.

Our London representative writes, 8/7/26:—"Trade is in a deplorable condition here, owing mainly to the prolonged coal dispute, and the phenomenally wet and cold season we have experienced. . . . 'Hope springs eternal'—and with the severe lesson the extremists of the so-called Labor Party have experienced, everybody hopes and thinks that trade will rapidly improve when the miners have learned sense as the railway and other transport workers seem to have done over the general strike."

#### Hamburg Market.

Messrs. Timm and Gerstenkorn, Fruchthof, Hamburg, state that the past season has shown a steady demand for Australian Apples, and prices have been good.

The favorite Apples here are the West Australian Apples; also South Australian and Victorian, as well as New Zealand Apples are well liked, while Tasmanian Apples, if not clean-skinned, are neglected on the Hamburg market. The best-liked kinds at the beginning of the season are Jonathan, Cleopatra, Dunn Seedling, Rome Beauty, Cox, and at the end of the season Statesman and Sturmer. It is advisable that the shipments are not made too late in order that the last sales can take place at the beginning of June. The sizes may be between 2½ to 2¾ inches, the most liked sizes are 2½.

#### English Markets.

**London (17/8/26).**

J. O. Sims, Boro' Market, London, S.E.1., reported sales of Tasmanian Apples ex s.s. "Barrabool" at the end of July. Prices varied from 7/- to 14/6, mostly about 10/- to 10/6. Sales on July 29 realised:—Cleos., 7/3 to 13/-, mostly 10/- to 12/-; S.T.P., 9/- to 13/6, mostly 12/- to 13/-; S.N., 11/- to 12/-; F.C., 10/- to 10/6; R.B., 9/9 to 10/6; others, 7/6 to 11/-; S.T.M., 9/3 to 11/-; S.P.M., 10/- to 12/-; S.P., 8/3 to 10/6; L.P., 8/6 to 10/-; Jons., 8/- to 10/6; C.E., 10/6.

On August 5, Tasmanian Apples sold ex cold store, realised:—S.T.P. (some wasted), 6/9 to 13/-, mostly 10/6 to 12/6; F.C., 10/6 to 11/6;

S.N.P., 12/-; Cleos., 11/6 to 12/-, New Zealand Apples ex cold stores:—S.T.P., 7/-, 11/6; mostly 10/-, 11/-.

On August 17, 1,500 cases of Tasmanian Sturmers ex cold store sold at 16/- per case.

South African Oranges were reported as selling well.

**Liverpool (11/8/26).**

Messrs. J. C. Houghton & Co., Liverpool, reported good prices for American Apples, Californian Gravenstein realising 13/9, 19/3 a box.

Californian Bartlett Pears also sold well, though some were rather too ripe. Prices were from 17/- to 23/- a box.

South African Oranges are reported as of good quality and in sound condition, prices for 2,000 cases varying from 17/- to 27/-.

#### Dried Fruit Sales.

**London (6/9/26).**

The Australian dried fruit sales recorded with the London agency of the Commonwealth Dried Fruits Control Board for the week ending September 2 represented 107 tons of Sultanas, at an average of £68/11/9 a ton; 178 tons of Currants at £40/13/-, and 15 tons of Lexias at £37/19/- a ton.

These sales bring the total realisations for this season to 3,348 tons of Sultanas at an average of £71/9/5 a ton; 1817 tons of Currants at £43/18/5 a ton, and 186 tons of Lexias at an average of £40/5/2 a ton.

#### AUSTRALASIAN MARKETS.

##### Victoria.

**Melbourne (24/9/26).**

V.C.C.A. market representative reports as follows for the week ended September 24, 1926:—Sales during the past week constitute a record to date. The exceptionally bright weather conditions and general lightening of supplies were responsible for this. It would be too much to hope for a continuance of these good results. There is still a marked disparity between prices for oversized and medium quality fruit to those being obtained for the highest quality stuff.

Prices were as follow:—Navel Oranges, A quality special, 12/- to 18/-; B quality special, 11/- to 17/-; C quality special, 9/- to 15/-; standard grade, 1/- lower; a few special lines of super Navels realised up to 20/-; Common Oranges, New South Wales, 7/- to 11/-; Victorian, 10/- to 14/-; Mandarins, many lines of these are opening up attractively, but are practically juiceless, very low prices have been returned for these, A quality special, large, 13/- to 15/-;

medium, 9/- to 12/-; small, 6/- to 8/-; very small, unsaleable; Lemons (those improved 2/- per case during the week), prices, 7/- to 10/-.

#### New South Wales.

Sydney (21/9/26).

Mr. F. Chilton, City Fruit Markets, Sydney, reports:—Queensland Fruits.—Bananas, 16/- to 32/- per case; Pines, Smoothleaf, 10/- to 14/-; Tomatoes, 10/- to 22/- per half case. New South Wales Fruits.—Bananas, 16/- to 32/- per case; Lemons, 4/- to 7/6 per bushel case; Oranges, 4/- to 9/-; Navel, 7/- to 14/-; Mandarins, Emperor, 7/- to 15/-; Eating Apples, Granny, 9/- to 17/-; Grapefruit, Shaddocks, etc., 4/- to 10/-; Passions, 5/- to 18/- per half case, Loquats, 3/- to 10/-. Victorian Fruits.—Apples, Jon., 6/- to 13/- per bushel case; Pears, Jos., 15/- to 23/-; W.C., 8/- to 15/-. Tasmanian Fruits.—Apples, S.P.M., 6/- to 14/- per bushel case; F.C., 6/- to 10/-; Jon., 6/- to 13/-; Cleo., 6/- to 12/-; C.P.M., 6/- to 14/-; Dem., 11/- to 15/-; S.T.P., 4/- to 8/-.

Choice colored eating Apples have advanced in value. Small and inferior quality Sturmers are still practically unsaleable. A better demand exists for Pines and choice Citrus fruit, but small Mandarins are neglected.

Choice quality Tomatoes are scarce and dear.

#### Tasmania.

Hobart (18/9/26).

Demos., good quality, 10/- to 11/-; fair to medium, 7/- to 9/3; small, 2/6 to 3/6; S.T.P., best choice lots, 5/- to 5/6; fair, 4/6 to 4/9; medium, 3/- to 4/-; small and withered, inferior grades, 1/- to 2/6; F.C., very dull for colored, 3/- to 3/6; small, unsaleable almost, 2/- to 2/6; S.P.M., No. 1, fair, 6/-; small medium, 2/6 to 3/6; inferior and very small, no demand, 1/- to 2/- per case; Jons.,

medium, to 4/5; N.W., small, 2/3 to 3/-.

#### South Australia.

Adelaide (18/9/26).

Apples (eating), 8/- to 10/- per case; cooking, 6/- to 8/-; Bananas, 30/- to 32/-; Lemons, 6/-; Nuts (Almonds), 1/- to 1/2 per lb.; Brazil Nuts, 13/- per dozen lb.; Coconuts, 4/- to 5/- doz.; Peanuts, 11/- per dozen lb.; Walnuts, 12/- per dozen lb.; Oranges (common), 7/- per case; blood, 8/-; Mandarins, 10/- to 12/-; Navel, 12/- to 14/-; Poorman, 6/-; Passion Fruit, 52/- to 56/-; Pine-apples, 13/- to 15/-.

#### Queensland.

Brisbane (21/8/26).

Lemons, prime, 3/- to 4/-; others, 2/6 to 3/- half case, 7/- to 8/- bushel; Limes, 2/6 to 4/- half case, 7/- to 8/- bushel; Pineapples, roughleaf, prime, 4/- to 7/-; others, 1/- to 3/- a dozen, 6/- to 14/- case; smoothleaf, prime, 6/- to 8/6; others, 4/- to 5/- case, 2/- to 6/- dozen; Passion Fruit, 9/- to 16/- half bushel; Oranges, 5/- to 9/-; special, 10/- to 10/6; Navel, prime, 14/- to 16/-; others, 9/- to 13/- bushel case; Mandarins, 4/- to 14/-; specials, 14/- to 20/-; Papaws, 1/6 to 4/6; Custard Apples, 3/- to 5/-; Strawberries, 6/- to 18/- a dozen boxes; Grape Fruit, 3/6 quarter case, 9/- bushel case; Seville Oranges, 6/-.

#### Western Australia.

Perth (18/9/26).

Apples, Dunn's (a few), dumps, to 23/3; flats, 8/6 to 13/3; Cleo. (a few), dumps, 13/- to 15/-; Granny, prime, dumps, 20/- to 25/9; flats, 12/- to 14/-; others, dumps, 17/- to 19/-; Yates, prime, dumps, 17/- to 21/6 (special, to 25/-); flats, 8/6 to 12/6; others, dumps, 14/- to 17/-; Romes (a few), dumps, to 17/-; Dohertys, dumps, 14/- to 19/3; Rokewoods, prime dumps, 16/- to 18/6; flats, 8/- to 12/-; others, dumps, 13/6 to 15/6;

Oranges, Navel, dumps, 8/- to 15/- (special, to 18/-); flats, 6/- to 10/- (special, to 14/-); Valencias, flats, 6/- to 10/-; Mandarins, flats, 5/- to 13/6; Lemons, flats, 2/- to 5/6 (special, to 8/6); Louquats, flats, 5/- to 12/6; Passion Fruit, quarter cases, 7/- to 10/6; Cape Gooseberries, 6½d. to 7½d. per lb.

#### New Zealand.

Dunedin (9/9/26).

Reilly's Central Produce Mart Ltd., reports the following prices:—Pears, choice desserts, to 5d.; cooking 2½d.; Apples, Delicious, to 14/3; Sturmers, to 10/6; Jonathans, to 9/6; other desserts, to 7/6; choice cookers, to 7/6; small inferior, unsaleable; Lemons, to 22/-; Mandarins, Sydney's, to 24/-; Adelaide's, 26/-; Oranges, Poorman's, Adelaide's, 18/-; Sydney Navel, 24/-; Adelaide Navel, 22/-; choice smooth-skinned Sevilles, 20/-; rough, 14/-; Bananas, green, 30/-; ripe, 40/-; Pines, 24/-.

#### FRUIT MARKETING IN BREMEN.

The "Free Port" of Bremen (Germany), is the centre of a large fruit-consuming district, and supplies are received from all over the world. One of the progressive firms trading in the Fruchthof, is the Fruchthandel Gesellschaft (Messrs. Scipio and Fischer), who handle green fruit and vegetables. A circular illustrating their premises indicates up-to-date warehouse and salesroom accommodation, with a private junction railway to the city warehouse.

A feature of the fruit auction room is a huge auction clock. Figures on the periphery of the dial represent prices, and rows of numbers in the centre of the dial indicate the seat numbers in the hall. The hand is put into motion, and may be stopped from any seat in the hall by means of an electric button, as soon as it points to a price acceptable to the

## FRUIT SHIPMENTS — TO NEW ZEALAND

### REILLY'S CENTRAL PRODUCE MART LTD., DUNEDIN

advise Growers of CHOICE FRUITS to ship to Dunedin

**REILLY'S** anticipate a keen demand for all lines of choice Fruit arriving on this market between the months of July and December.

**REILLY'S** offer Fruitgrowers their faithful service and will be pleased to advise Fruit Shippers the probable prices available and prospects of making suitable sales.

Cable or write to **Reilly's, Dunedin**. Codes used—BENTLEY'S, MARCONI'S, WESTERN UNION, A B C 5th & 6th Ed.

**REILLY'S GUARANTEE FAITHFUL SERVICE TO ALL CONSIGNORS.**



bidder. When the button is pressed the corresponding seat number in the centre of the dial lights up simultaneously. This arrangement must greatly simplify the process of selling.

#### CANADIAN APPLE PROSPECTS.

Canadian Apple crop prospects on June 10, indicated a yield 105 per cent of 1925, or 3,045,900 barrels. British Columbia promises to have the largest crop on record for that Province, which is estimated at

3,525,500 boxes. With the exception of Ontario, which is considerably lighter than last year, Quebec and the Maritime Provinces have prospects for increased yields. It is estimated that Ontario will have 774,000 barrels, Quebec 77,900 barrels, New Brunswick 40,000 barrels, and Nova Scotia 978,726 barrels.

Owing to the lateness of the June Drop in the Eastern Provinces, which is still in progress in some districts, it is quite possible the prospects may still change materially.—Canadian Department of Agriculture Fruit Crop Report.

#### TRANSPORT AND STORAGE OF FRUIT.

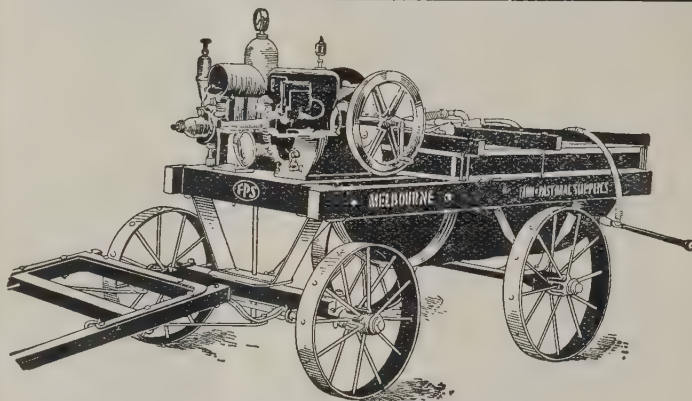
##### Air-Free Case Should be Used.

Growers and exporters have, for a long time, recognised the need for a fruit case which will stand up better to the large amount of handling they are subjected to, and also allow of better ventilation in cool store or refrigerated chamber on board ship. The Hannan-Clark air-free case, which has been invented by Captain Hannan, fills the bill. The corner boards of the side of the cases are made the same thickness as the ends of the case, thus allowing space, when cases are packed together, for air to pass right through. This case has many advantages over the ordinary case, some of them being (1) a much more substantial case, which will stand handling, (2) provides a channel of air right throughout the storage space, (3) minimises the risks of bruising, and the use of battens.

Experts who have seen this case used, laid special emphasis on the value of same for providing a regular current of air, and thus carrying away gases, etc., which affect fruit in storage and transport.

The agents for the case, Messrs. F. Cave and Co., will be pleased to demonstrate the case to growers in their district, or at the firm's store in William-street, Melbourne.

## THE NEW HERCULES SPRAYER



Two guns at full 300 lbs. pressure—this is the achievement of the New HERCULES Sprayer, which consists of a 1½, 2½, or 3½ B.H.P. HERCULES Engine geared direct to a Metters' Power Pump. If you have a Power Sprayer already, let us quote you for fitting our engine or pump, or both. Write at once for particulars, or apply for a FREE DEMONSTRATION in your own Orchard.

## THE FARM & PASTORAL SUPPLIES

PTY. LTD.

Machinery Merchants,

500 BOURKE STREET, MELBOURNE

## FRUIT TREES

CLEAN, HEALTHY,  
.. WELL-GROWN ..

All the Leading Varieties  
Correspondence Invited

J. W. LAWREY

Kinglake Nurseries YARRA GLEN, Vic.

## Complete Riddance of Citrus Insect Pests

Put aside doubts and prejudice and avail yourself of Cyanogas fumigation to ensure complete riddance of Citrus Insect Pests from your orchard. Users are most enthusiastic over its unvarying efficiency. You will be, too. Commonsense, as well as economy, urges it. Government authorities recommend it. Over 250,000 trees were treated in Australia last season.

Quite safe. Easily done in the day-time. Eliminates frequent spraying, and one application gives two or more seasons' freedom from trouble. Think what this means to the yield and healthiness of your trees.

Any of the following distributors will freely give you advice and full particulars concerning

NEW SOUTH WALES.—  
Buzacott & Co. Ltd. Sydney.

VICTORIA.—A Victor  
Leggo & Co., Melbourne.

SOUTH AUSTRALIA.—The  
S.A. Farmers' Co-op.  
Union Ltd., Adelaide.

QUEENSLAND.—Buzacott's  
(Qld.) Limited, Brisbane.  
WEST AUSTRALIA.—Har-  
ris, Scarfe & Sandovers  
Ltd., Perth.

TASMANIA.—Davidson &  
French, Launceston.  
Roberts & Co. Limited,  
Hobart.

# CYANO GAS

It is confidently anticipated that if the case is universally adopted that the shipping companies will allow a reduction in freight owing to the saving of dunnage.

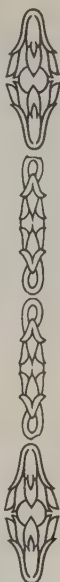
#### FOURTEEN MILLION FORDS.

##### Huge Production Figures.

The Ford Motor Company of Australia Pty. Ltd., Geelong, announces that recent advices received from overseas bring the information, that on July 21 last, the 14 millionth Model "T" Ford motor was produced at Detroit.

It took Ford seven years to produce the first million cars. The first model "T" motor was manufactured on October 1, 1908, and the million mark was reached on December 10, 1915. Eight and a-half years later the production total had climbed to 10 million—an average of more than a million cars per annum over this period—the 10 millionth motor coming off the assembly line on June 4, 1924.

So fast, however, had Ford facilities for mass production grown, that almost exactly two years later (July 21, 1926), an additional four million Fords had been manufactured—an approximate average of two millions per year.



## THRIPS

### Successful Eradication

The U.S.A. Department of Agriculture says:—

"Spraying for thrips has proved wonderfully successful wherever proper sprays have been used, and the work done with care and thoroughness.

"Certain Miscible Oils were most penetrating and effective."

## MACCOL No. 2

is a Miscible Oil specially prepared for late spraying. It is exceptionally effective.

Orchardists, write immediately for full particulars, methods and times of spraying. One spray will insure your crop.

Investigation costs nothing.

**A.H. McDONALD & Co. Pty. Ltd.**  
570-4 Bridge Road, RICHMOND

W. McF.

## WISKEMANN SMITH

& CO. LTD.

Specialists in

**NICOTINE 95/98%**

**NICOTINE SULPHATE 40%**

Strength and Quality Guaranteed  
at Competitive Prices

also

**POTASH (Industrial & Fertilizing)**

Invite enquiries from responsible  
houses in every State in Australia  
also New Zealand with a view to  
Sole Representation

CABLE NOW FOR PRICES

Telegraphic Address :

**WISKEMANN, LONDON**  
Wool Exchange, London, E.C.2, England

## FRUIT GROWERS!

Avoid bruising of your fruit in transit  
by using the

## "AIR FREE" CASE

Patent 9331/22

which surpasses any other case for  
use in Cool Stores, or Transport  
of Fruit to Local, Interstate and  
Overseas Markets

Orders now being received for 1927  
Export Season

Full particulars from

**F. Cave & Co. Pty. Ltd.**

Wholesale Fruit Merchants & Exporters  
**Western Market, Melbourne**

Cable & Telegraphic Address : "Cavecofruit," Melbourne  
Telephone : F.3930



# Valuable Orchard Equipment

## The "Duro 3 in 1" Orchard Ladder

(Patent applied for)

Efficient : Durable : Economical

**T**HE NEED for a durable ladder which will withstand the exposure to the elements without depreciating, and at the same time be light and strong enough to withstand the rough usage usually associated with orchard ladders, has long been felt. The "Duro 3 in 1" ladder has been designed by an orchardist of many years' experience, and is not an experiment, as it has been very severely tried and tested out in actual orchard practice.

The "Duro 3 in 1" ladder, being made entirely of steel, and having not one particle of wood in the entire make-up, is practically indestructible, and is far more serviceable than an ordinary orchard ladder of the

ladder of a higher type is necessary for the taller growing trees. In ten seconds the "Duro 3 in 1" ladder can be converted into a three-legged type as shown in illustration No. 2, thus increasing its reach to nearly double.

It is perhaps in this setting that the ladder's excellence can be fully appreciated. Being so easily converted into this high, strong three-legged ladder from the steps, it does away with the necessity of having a separate ladder for the high work, thereby saving the expense of one ladder. This means, that for the price of one, you really have two orchard type ladders, both of which are very serviceable and practical

safe balance. Owing to its extraordinary design, the ladder widens at the top, giving absolute freedom to stand on the upper rungs with both feet, and the danger usually experienced when working near the top of the ordinary type is eliminated. Owing to the specially designed strut used, which supports both sides of the ladder at once, the danger of "side falls" is reduced to a minimum. There is a sense of security when using the ladder in this form, which is entirely absent from the usual type.

In another form, the "Duro 3 in 1" ladder can be used as an ordinary wall ladder, the strut or prop being totally removed in a few seconds so as to be quite out of the way for this class of work.

In this form the ladder is a strong job, suitable for any work for which an ordinary ladder of the same height, could be used.



No. 1

usual type. By the illustrations it will be seen that it is really three ladders in one. Illustration No. 1 shows the ladder in the step form, which is the usual type for pruning and picking. The ladder in this form stands four square, and its rigidity is exceptional, the top platform having ample area upon which to stand and work in comfort. All the rungs present a broad flat surface to the foot.

Every orchardist knows that in the usual run of picking or pruning, two ladders are usually necessary—small steps for the lower trees, while a

implements, which are entirely unaffected by exposure to the sun's heat or winter rains.

Serviceability in the step ladder form is so pronounced that it needs very little comment here, but in the three-legged form it excels. Every orchardist knows the difficulty of trying to balance on the top rung, or next to top rung of the ordinary three-legged ladder, the top steps of which narrow down to a mere inch or two, with insufficient room for one foot, leave alone two. The nearer the top of the ordinary three-legged ladder the less the foot-hold and the harder to work to keep a

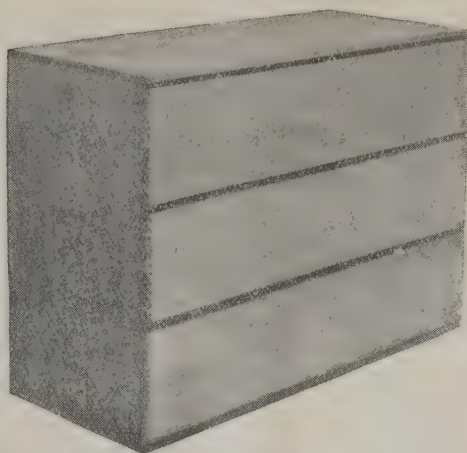


No. 2

Safety is not the least important factor of this new orchard implement, as the rungs do not get rotten with exposure, and being all steel, with no wood whatever in its construction, it will not crack or depreciate through exposure to the elements, as is the case with wooden implements of any sort.

Take advantage of the special offer and take one on a month's free trial, and return it at the end of the month if you do not like it.

For price and particulars apply either to your agent or direct to Atomol Dusts Limited, Dumphries Place, off Gilles Street, Adelaide.



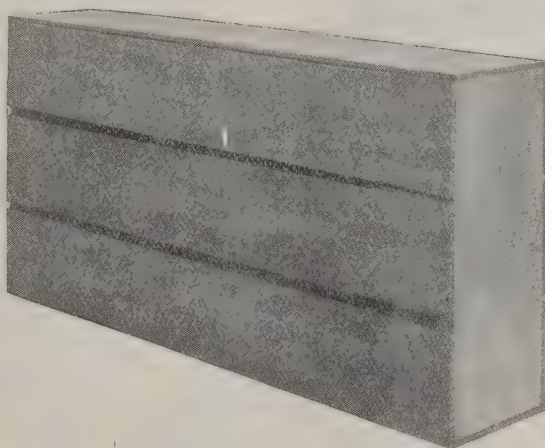
Australian Apple and Citrus Dump Bushel Case.

## SOME ADVANTAGES IN FAVOR OF IMPORTED CASES

- (1) Full drawback of duty allowed on all cases exported.
- (2) 1/3rd less freight than on Hardwood cases.
- (3) 25% rebate on rail freight for full trucks.
- (4) All timber cut to exact sizes making it an easy matter to assemble a symmetrical case.
- (5) Every piece of timber fit and ready for use, thereby eliminating waste.
- (6) Can be supplied in shooks or made up and branded.

## SOFTWOOD CASES

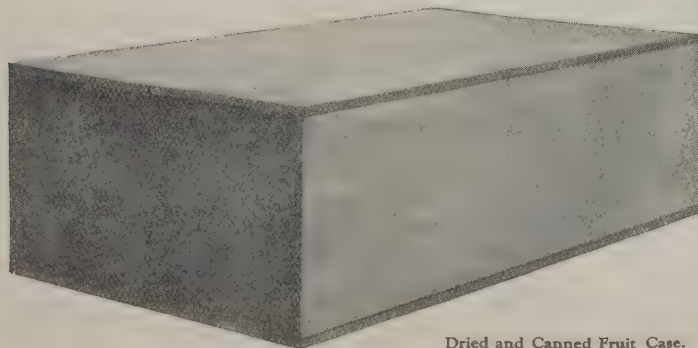
(IMPORTED)

*Cheaper than hardwood if exported.**Cut to Australian Standard Sizes*DUMP BUSHEL with one piece top and three equal piece sideUPRIGHT BUSHEL with one piece top and three equal piece sideDRIED FRUIT CASE with one piece side and two equal pieces tops and bottomsCANNED FRUIT with one piece side and two piece tops and bottoms

Upright Bushel Case with Centre Partition.

Particulars from the Largest Importers

## Overseas & Interstate Trading Co. Ltd.



Dried and Canned Fruit Case.

22 Market Street,  
Melbourne

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Phone Central 9110

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Also  
King William Street,  
ADELAIDE



## Labour Saved is Money Saved!



Modern Methods and Tools will enable you to save Labour in many ways, and also allow you to do a better job than before.

These two Items are of proved value, and you can rely on their quality. Packing is free and F.O.R., Melbourne.

### "SEYMOUR" EARTH AUGERS

With a "SEYMOUR" EARTH AUGER you can sink three times the number of Post Holes in a day than you can with a spade, and also do it with less trouble!

Another feature is that the "SEYMOUR" makes a round hole just the size required to take the Post, so there is no ramming required!

Compact, light, and very strong, no one on the land should be without one.

#### PRICES:

|      |      |      |      |      |      |      |             |
|------|------|------|------|------|------|------|-------------|
| 3in. | 4in. | 5in. | 6in. | 7in. | 8in. | 9in. | 10in. diam. |
| 9/6  | 9/6  | 9/6  | 9/6  | 10/3 | 11/3 | 12/3 | 13/6        |



### SOLID STEEL EARTH SCOOPS

If you have a good scoop, you can save yourself an immense amount of digging. Our Scoops are Pressed COLD from a sheet of steel, and so are especially strong at the corners. Fitted with stout wood handles, they will give a lifetime of satisfaction.

#### PRICES:

|                        |           |           |
|------------------------|-----------|-----------|
| Capacity—3 Cubic feet. | 5 Cu. ft. | 7 Cu. ft. |
| 65/-                   | 67/6      | 70/-      |

PACKED FREE and F.O.R. Melbourne.

**McPherson's**  
Proprietary Limited

582-592  
Collins St. Melbourne

## A Sound Investment

*Secure a Profit of 13% and assist in the development of the Australian fruit industry*

JUSFRUTE, that's all.

Any commercial enterprise depends for its existence and development upon **SERVICE**.

Jusfrute Limited has rendered effective service to the general public, the fruit industry, and to its shareholders.

After only four years' life JUSFRUTE LIMITED, of GOSFORD, N.S.W., is proud to show as at 31/12/25 a balance-sheet with assets exceeding liabilities, and to pay a preference dividend of 9%. This is a splendid achievement in view of the fact that the capital of the Company was not more than £8,500, and that over £3,000 had been spent in research work, and paid for out of profits. **EQUIVALENT TO AN ANNUAL DIVIDEND OF OVER 13%.**

### AN EXPANDING BUSINESS.

Really phenomenal success has attended the enterprise of the Company in the manufacture of essential oils, juices, cordials, and other by-products—**IN MAKING HEALTHFUL AND VALUABLE PRODUCTS FROM UNDERSIZED AND BLEMISHED FRUIT.**

To cope with increased demand for all its lines, to manufacture new lines, and to instal new plant to still further eliminate waste, a new issue of capital is now being offered.

Jusfrute Ltd., which is now operating at Gosford only, will, if accorded sufficient support by the growers of the various fruit districts, **EXTEND ITS OPERATIONS TO OTHER DISTRICTS**, and besides paying high dividends, will further assist in stabilising the fruit industry.

### A SPLENDID INVESTMENT.

30,000 shares of £1 are offered, half of which are available as participating preference shares. The Company has a well established trade in highly remunerative lines, and good dividends are assured. This is an excellent opportunity for all investors, and is a double investment for the fruitgrower.

The Directors reserve the right, if found expedient, not to issue the full number of shares now made available. Applications are numerous. Therefore write at once for full particulars to—

### JUSFRUTE LTD.

25 O'Connell Street, Sydney.

Please send me prospectus and full particulars of present share issue.

NAME.....

ADDRESS.....

DATE.....

## AGRICULTURAL RELIEF IN U.S.A.

**"Economically Unsound Legislation" is Opposed.**

LEGISLATION for the relief of the agricultural farm industry has been prominently before the U.S.A. House of Representatives during recent months, states the June issue of the "Guarantee Survey." It is stated that American farming has not regained its pre-war status, there is economic depression abroad, agricultural prices have declined, taxes have heavily increased. The Haugen Bill was introduced to provide for an equalisation fee for the maintenance of prices of basic agricultural commodities at levels conforming to world's prices plus import duties and the cost of transportation to the United States, thus putting, the proponents of the Bill claimed, "agriculture on the same basis of protection as industry."

An amendment to the Bill provided, in fact, for what was deemed to be a subsidy of 175 million dollars. The Bill was defeated.

Other Bills have been considered to provide credit facilities to be administered by a Federal Board elected by farmers' co-operative organisations. Price-fixing proposals are deemed unsuitable, as they would artificially increase production. "It is hoped," concludes the "Survey" "that an adequate solution of the agricultural problem may be found without resorting to economically unsound legislation."

## AUSTRALIAN INDUSTRIAL DELEGATION TO U.S.A.

**Fruit Co-operatives Should be Studied and Reported On.**

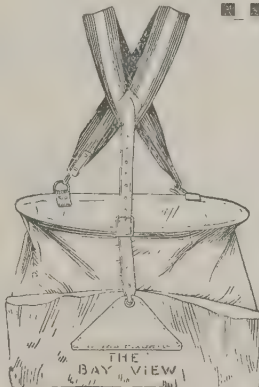
The Commonwealth Government proposes to send a mission to the United States to study the conditions of industrial life in that country. We have much to learn from America, and it is hoped good will result. It should be well worth while for the delegation to study the co-operative methods which have proved so successful in the various sections of the fruit industry. It has apparently been patient work, building up co-operative organisations on service and efficiency, and by linking up with the business end—the wholesalers and retailers—great success has been made possible. It would be to the advantage of Australia and Australian producers if similar methods were adopted here.

## SUBSCRIBERS' PAYMENTS RECEIVED.

We acknowledge with thanks having received, at Head Office, the following renewal subscriptions from our readers up to August 20, 1926. The date in brackets indicates to when the subscription is paid. The list does not include payments to our branches in the other States, nor deliveries through our wholesale distributors.

If any reader wishes to have a receipt we will forward same on application.

Adelaide Chemical Co. (June, '27), Aust. Co-op. Producers' Wholesale Federation (June, '27), Z. Akers (June, '27), B. A. Arndt (June, '27), A. Andreski (June, '27), F. J. Akers (June, '27), G. E. Archer (June, '27), H. Andrews (July, '27), A. Butcher (June, '27), A. H. Blundell (June, '27), Wm. Burrows (June, '27), P. R. W. Burns (December, '28), T. E. Butler (June, '27), J. Burton (June, '27), Barrett-Lennard Bros. (June, '27), H. Blake (June, '28), J. Baldwin (June, '27), G. Brown (June, '27), C. M. Brooke and Sons (June, '27), C. Batchelor (June, '27), H. J. Clark (December, '26), V. Cahill (June, '27), Chas. Cooper (June, '27), H. G. Caldicott (June, '27), A. W. Cornish (June, '27), P. J. Clark (June, '27), J. Cogger (June, '27), C. Connor (June, '27), J. J. Darby (June, '27), J. Enright (June, '27), E. A. Everett (June, '27), E. M. Fawke (June, '27), T. A. Frankcombe



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(June, '27), H. G. Reynolds (June, '27), G. Richards (June, '27), R. Russell (June, '27), J. Robinson (June, '27), R. A. Routley (June, '27), H. W. Smith (June, '27), Thos. Sullivan (June, '27), F. C. Staniford (June, '27), W. Smith (June, '27), G. W. Summers (June, '27), W. Scudder (November, '26), John Scott (June, '27), W. M. Smith (June, '27), A. Stein (June, '27), L. W. Schmidt (June, '27), E. A. Sampson (June, '27), D. C. Sutton (June, '27), S. H. Scott (June, '27), F. G. Scammell (June, '29), N. Spencer (June, '27), Mrs. Shead (June, '27), C. A. Setterberg (June, '27), Selleck and Stubbe (June, '27), A. Snelling (June, '27), N. Jackes (June, '27), J. M. Sinclair and Sons (June, '27), J. Sharkie (June, '27), J. H. Sprague (June, '27), D. Senior (June, '27), Settlers' Club, Mildura (June, '27), Studley Pres. Co. Ltd (June, '27), Thos. Summerville (June, '27), R. M. Sheppard (June, '28), Cr. M. Salathiel (June, '26), J. G. Stanton (June, '27), G. G. Turri and Co. (June, '27), A. J. Todd (June, '27), A. H. Taylor (January, '27), Toomuc Valley Orchards (June, '27), F. H. Taylor (June, '26), A. S. Thompson (June, '30), A. U. Tonking (June, '28), A. E. Theile (June, '27), E. Tode (June, '27), L. Thompson (June, '28), J. P. Tooby (June, '27), S. Thompson (June, '27), S. G. Vaughan (June, '28), L. H. Vear (December, '27), H. W. Von Bertouch (June, '27), J. Vickers (June, '28), F. D. Virgo (June, '27), G. L. Ward (June, '27), S. Whitten (June, '27), Woorinen Fruitgrowers' Co-op. Ltd. (June, '27), H. Wills and Co. Ltd. (June, '27), W. J. Whitten (June, '27), W. H. Palthe Van Wesenhagen (June, '27), I. Weir (June, '27), W. G. Western (June, '27), H. G. Willis (June, '27), Water Conservation and Irrigation Commission (June, '27), Waterman Bros. (June, '27), F. Ward (June, '27), F. F. Wagner (June, '27), J. W. Wilson (June, '27), L. Winner (June, '27), Wilson Moses (June, '27), A. Warner (June, '27), H. J. Willoughby (June, '28), E. W. Wortley (June, '27), Wilkemann Bros. (June, '27), E. Weitnauer (June, '27), J. T.

Wright (June, '27), W. H. Willoughby (June, '28), D. G. Wills (June, '27), A. Yeates (June, '27), Yanco Exper. Farm (June, '27), J. H. Young (June, '27), E. Zimmerman (June, '27).

### SOIL FERTILITY.

ON THE AVERAGE LAND that is cropped year after year organic matter is the limiting factor. Year after year the soil is clean cultivated and all organic matter taken off in crops until the soil becomes short of that material.

This condition is brought about slowly year by year. It is just as slow a matter to get the soil back into condition as it was to get it out. It is not the quantity of organic matter that is put into the soil each year so much as that a certain amount should be worked in each year.

It might be said that the soil must have time to digest the yearly application of vegetable matter. Time is the essence of the contract. There are six or seven minerals that go to make up plant life. Intelligent application of these elements, where needed, will keep the proportions right. The only means of ascertaining the need of certain minerals is by experimenting in the field. However, applications of commercial fertiliser on a soil deficient in organic

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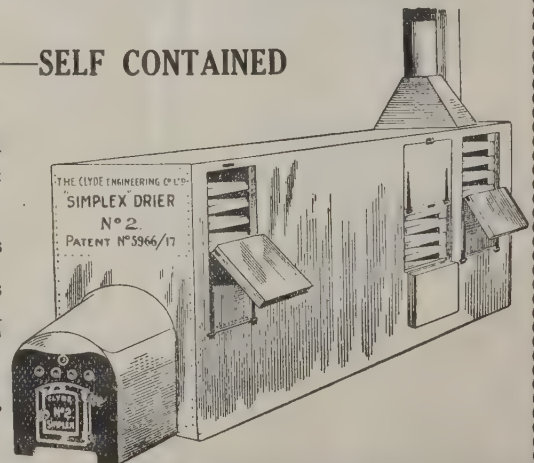
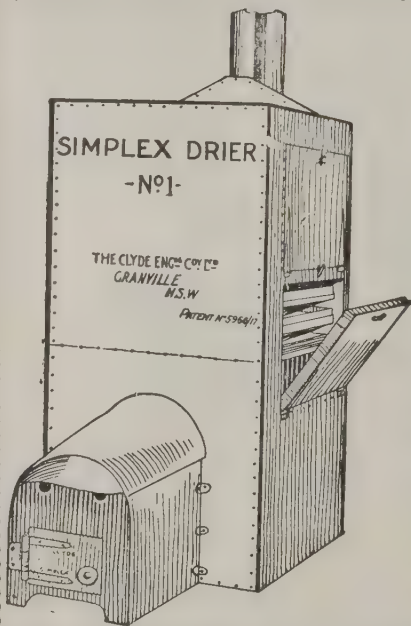
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SIMPLE — SELF CONTAINED

Made in Sizes to suit

Householders  
Small Orchards  
or  
Large Factories



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GRANVILLE, N.S.W.

matter is only an added discouragement to the already sick plant.

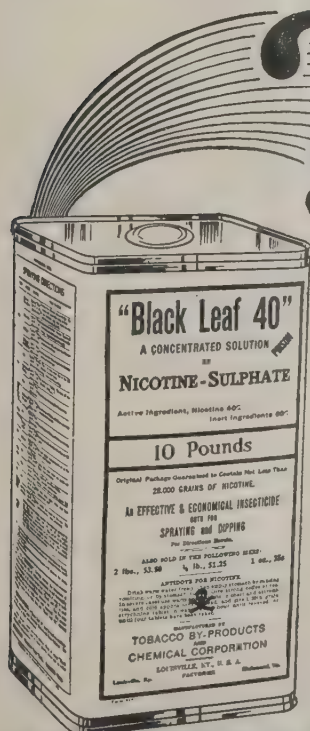
The best organic matter to add to a soil is without question the common barnyard manure. It has qualities that bring a run down soil back quicker than any other. The next best humus builder is a leguminous cover crop. Any kind of a cover crop, bean straw or grain straw ploughed under year after year will

bring run down soil back or keep a good soil in good physical shape.

As it has been said very often, there is no science of fertilisation. The process of growing a plant is either so complicated or so simple that the scientific men never have discovered the secret. Empiricism is a word that is not in good repute with the theorist. It is a word that means that knowledge gained is by ex-

perience only, with no consideration given to scientific facts. As a rule it is a method that can be used with caution, but up to the present date it can be said that the best soil practice is founded upon empiricism—knowledge gained from practical experience in the field.

The time may come when there will be a science of soil requirements, but that time has not come yet. Men still watch nature to see how she does it and then go and do likewise. In nature it is plainly evident that decaying vegetation plays a leading part in soil fertility. So the man who is clean cultivating his ground year after year is slowly running up a bill with nature that will have to be paid in time by someone.—C. A. Nidever, in the "California Cultivator."



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| ARSENATE OF LEAD PASTE—Tins in cases, 2/60lb.          | 8d. per lb.  |
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| LIME-SULPHUR—Approx. 40/42 gallon drums or casks . . . | 1/3 per gal. |
| RED SPRAYING OIL—40-42 gallon drums or cask . .        | 3/- per gal. |
| SPECIAL COPPER-SODA MIXTURE—2/50lb. tins in case . . . | 8d. per lb.  |
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(But would you  
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**FRENCH  
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If so,  
demand  
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Many Australian and New Zealand Fruitgrowers are making their trees pay even today, simply because they use Potash.

*But it must be applied in sufficient quantity.*

If a complete mixture is offered—be sure it contains enough Potash to give the trees a real Potash dressing—say from  $1\frac{1}{2}$  to 2lb. each.

*You can sprinkle Potash lightly over a great surface and because it is too lightly applied—waste your money.*

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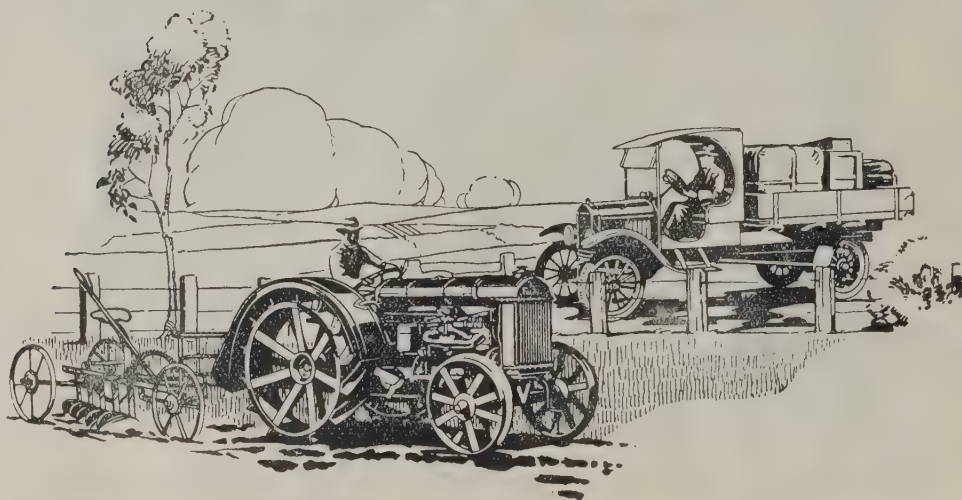
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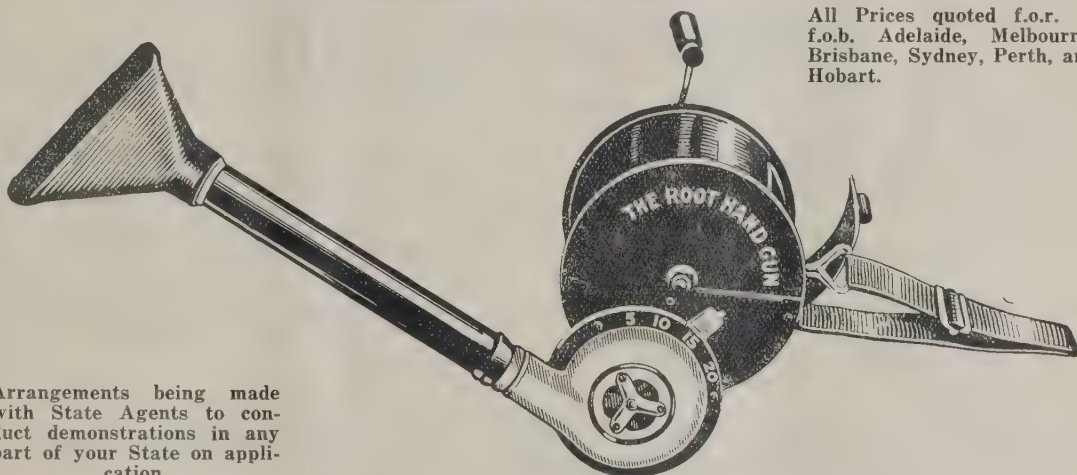
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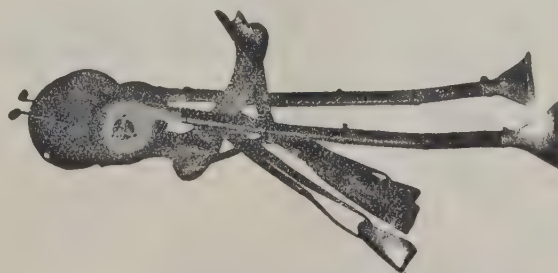
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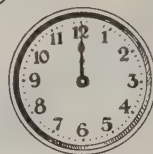
*Mr. Vine Grower—*

*What are You going to do about it?*

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*Will you easily and effectively cover 8 acres of vines  
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*Will you mix liquid copper spray and laboriously  
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*Do the job quickly and well with  
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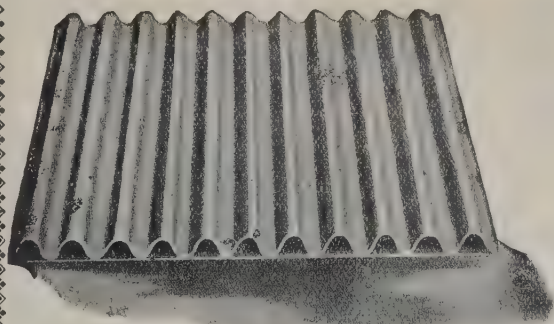
Name..... Address.....

Growing..... on ..... Acres.....



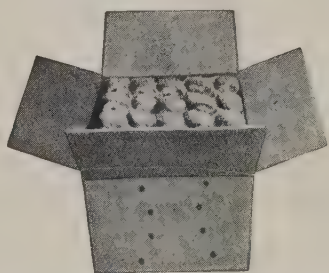
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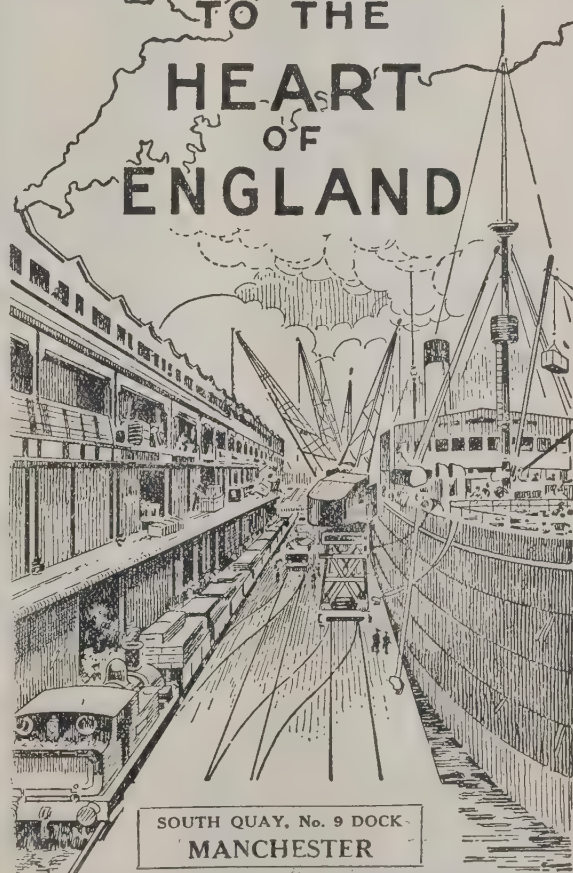
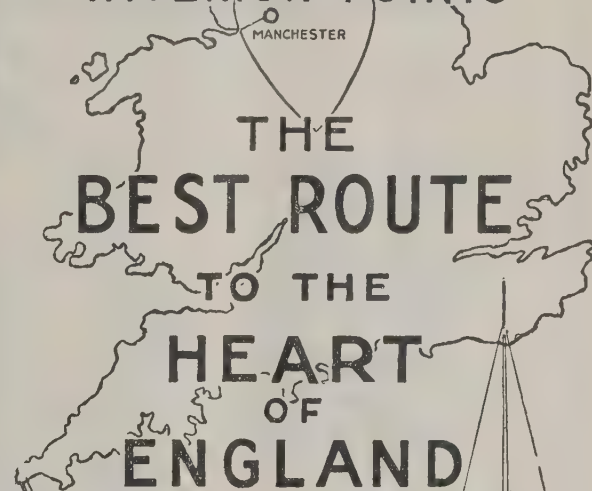
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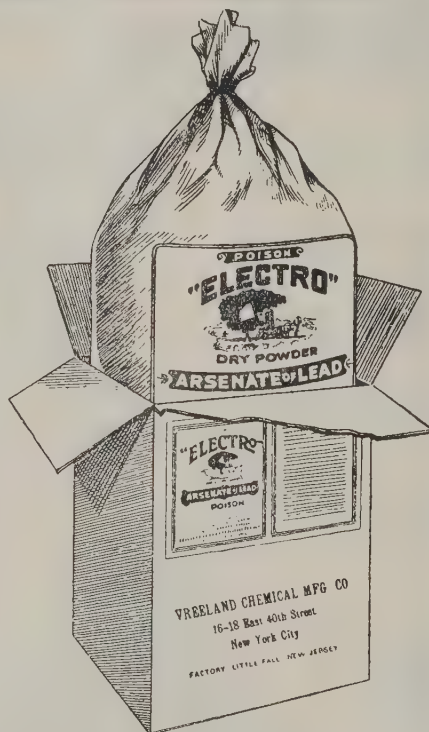
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highest development in  
Spraying Material



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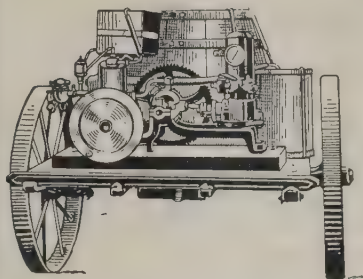
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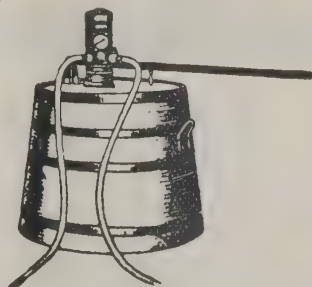
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| ARSENATE OF LEAD POWDER—Tins in cases . . .                | 1/8 per lb.  |
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| SPECIAL COPPER-SODA MIXTURE—2/50lb. tins in case . . . . . | 8d. per lb.  |
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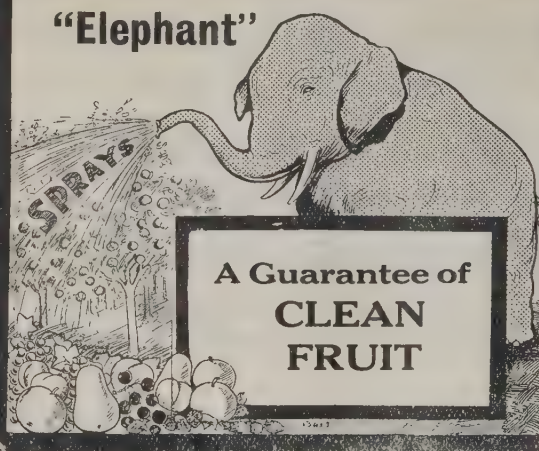
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## "FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of each Month.

Editorial and Management Notices.

Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printer's MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked "Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

## Subscriptions.

The annual subscription, post free within Australia and New Zealand, is 8/6. All other places, 10/6, post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

## Advertisements.

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States, as set out below.

Changes of copy for advertisements must be in our hands on or before the 17th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

"The Fruit World" Offices (where copies and full particulars are obtainable) are as follows:—

**VICTORIA** — Bank House, Bank Place off 410 Collins Street, Melbourne

**NEW SOUTH WALES** — 8 Bridge Street, Sydney.

South Australia: W. F. McConnell, Grenfell Buildings, Grenfell Street, Adelaide. Tasmania: Saunders & Co., Murray Street, Hobart. Western Australia: D. L. Hetherington, Colonial Mutual Buildings, St. George's Terrace, Perth. Queensland: Gordon & Gotch Ltd., Queen Street, Brisbane. New Zealand: Gordon & Gotch Ltd., Wellington. Dunedin and Auckland. Great Britain: Harvey H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

R. E. BOARDMAN, A.F.I.A., Managing Director and Editor.

E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director: HON. I. M. SHOOBRIDGE, M.L.C.

## NOTES IN BRIEF.

Tasmania expects a lighter Apple crop than last season. The 1926 crop of 3½ million bushels was a record.

Thrips have heavily reduced the Victorian Apple crop.

A severe frost in New Zealand took toll of the stone fruit crop in the Central Otago districts of New Zealand.

Experimental shipments of Bananas in Sydney from Fiji have realised up to 3/- per case higher than Queensland fruit, but the duty and freight charges make importations unprofitable.

The dreaded "Sigatoka" disease in Fijian Banana plantations is stated by scientists to be identical with the "black spot" disease in Queensland.

The commercial Apple crop of U.S.A. is reported to be the heaviest since 1920. The estimate is for 118,677,000 bushels, as compared with 99,132,000 last season.

A Canned Foods Week is to be held in U.S.A. from November 10 to 20, with the object of popularising canned foods. The Committee aims at having a local organisation in every important market.

Apple growers of Washington and Oregon (U.S.A.) have started a national advertising campaign through the North Pacific Boxed Apples Inc., with an initial capital of \$5,000. Growers are enthusiastically supporting the idea, and subscribing their quota. Shipping companies also contribute on the basis of per car handled.

A record crop of Apples—3,626,000 boxes—is expected in British Columbia this year. The previous record was 3,330,000 boxes in 1923.

Twenty year old Orange trees have been transplanted from some of the oldest citrus groves in Sarasota county to the boulevard parks in Venice by Prentiss French, landscape engineer. The transplanting was entirely successful, Mr. French reports, with the old trees, showing a vigorous growth in their new location.—"California Cultivator."

Nine hundred and sixty thousand cans, or 40,000 cases of canned Grapefruit were packed by the Florida Fruit Products Company at Eagle Lake this past season, Manager M. M.

Slayton reports. A considerable quantity of this output was marketed in foreign countries.

## IMPORTING CALIFORNIAN GRAPES.

Redwood or Cork Dust for Packing?

A consignment of 100 barrels of Malaga Grapes reached Sydney from California during September. Each barrel contained 30lb. of fruit, which was packed in coarse redwood sawdust. The Grapes opened up in good condition, and sold readily.

While advantages are claimed for the redwood sawdust over cork for packing, the cost is nearly double, and it is thought that for the export of Australian Grapes cork dust will be used—sterilised to kill fungi.

## CANADIAN DUTY ON APPLES.

The Canadian Department of Customs and Excise has placed a value on imported box Apples as follows:—

Apples imported in standard boxes, whose inside measurement is approximately 10½ x 11½ x 18 inches (without bulge) may, until otherwise determined, be rated for duty purposes at 29½ cents per box.

**Held Over.**—Owing to pressure on space, we have had to regretfully hold over several important articles, including "Fumigation," by Mr. S. A. Cock, Victorian Government Citriculturist.

**Curlwaa.**—First annual meeting held in September, Mr. S. P. Taylor presiding. Successful year recorded; Manager L. R. Strother reported 12,000 cases distributed June to September. Fumigation deemed essential, decided to approach N.S.W. Government. Decided to increase packing charges by 1d. per case to instal new machinery. Mr. C. McLeod appointed in place of Mr. H. B. Watmuff, resigned.

**Merbein.**—Mr. H. R. Paton, Secretary Merbein Citrus Association, reports probable record citrus crop in 1927. Spraying with Red Oil recommended, when blossoms have fallen, cleaning tree of pests.

## FRUIT FOR GERMANY.

Messrs. J. H. Lutten and Sohn, fruit importers, Fruchthof, Hamburg, Germany, advise that their agents in Western Australia are Messrs. H. F. and J. Simper Ltd., Fremantle Markets, Fremantle.

## Editorial Chats



### EXPORT FRUIT CONTROL.

**As Growers Throughout Australia Desire Full Details, Conferences Should Not be Held Behind Closed Doors, But Should be Open to the Press.**

EVERY thoughtful grower will give attention to the proposed Fresh Fruit Export Control Bill in its amended form in order that every aspect may receive due consideration.

There is ample time for the merits and demerits to be weighed before the growers will be called on to vote for its adoption or rejection. It is quite possible, of course, that the Bill may never be brought before Parliament.

It would be far better for growers to express themselves clearly on the question, as the Government would be made to look foolish if, after passing the measure, it were rejected by the growers.

If for this reason alone the decision to hold the last Conference on the subject behind closed doors, is to be deplored. Growers and the public should know the pros and cons. What is there to hide?

If Tasmania desires three representatives on the Board growers in Tasmania and in the rest of Australia have the right to know the reason why, and also the reason for the rejection of the claim.

It is not sufficient, on a matter of considerable public importance, for brief "communiqués" to be issued by a Government Department.

It would be thought that those desiring the Control Bill, would seize the opportunity of giving full information through the press.

Growers and the press expressed disapproval of the secrecy which has so far been displayed in handling this matter. What is to be gained by this "hush hush" policy? It leaves a feeling of uneasiness.

A Conference was held in Melbourne on July 14 between Tasmanian delegates (duly appointed) and certain Victorian growers. This Conference was held in private, no information reaching the growers till a depu-

tation waited on the Minister for Markets, presenting a draft Bill, which had been compiled, and urging its enactment before the last Federal session closed. Then followed emphatic protests from Victoria, Western Australia and South Australia. The Melbourne "Age," bluntly termed it "a hole and corner business."

Ninety per cent. of the exporting fruitgrowers in Australia were unaware that a Control Bill was even contemplated.

It was unfortunate for Tasmania, who accepted Victoria's "representatives" in good faith, believing they spoke for the Victorian industry; experience has proved to the contrary. Tasmania was then promised three delegates on the Board, but this proposal has since been rejected; South Australia and Western Australia were offered one delegate between them, but these two States thought differently, and demanded the right to be consulted.

The objectors to the hasty enactment of legislation in the dying hours of a session feel that their action was justified by the alterations now embodied in the draft Bill.

### The F.O.B. Trade.

There has been a steady increase in the business of purchasing fruit for export. This is in accord with the best practice in U.S.A. The question is now asked: Is the f.o.b. trade to come under the proposed "Control" scheme. The answer so far given is, "Yes and No."

"No" because the export fruit buyers can purchase and export in accordance with their contracts, and "Yes" because the purchasers in Britain must deal with the London Agency of the proposed Board and give private details of their business.

At the last Conference the clause dealing with f.o.b. trade was left to the Parliamentary draughtsman to construct, a motion having been carried, "having the effect of preventing any condition in the licence to be issued which would cause the discontinuance of f.o.b. sales."

At this stage the air is not clear on this vital clause. Some of the control advocates have expressed

opinions disapproving of the f.o.b. trade. The majority are understood to favor the f.o.b. trade.

It is not so much the provision in the licence to "permit the continuance" of the f.o.b. trade, but the conditions to which the purchaser must submit. If the would-be purchaser in Britain does not accept the conditions laid down, the trade ceases automatically. The American grower conducts the whole of his business on the f.o.b. and f.o.r. basis.

The whole position is fraught with difficulties in dealing with this highly perishable commodity. Improvements are possible, what is the best way of securing them?

Here is a Suggestion.—A small levy on next season's exports would be sufficient to finance the sending of two or more duly authorised representatives of the growers to U.S.A. and England to study the position and report thereon. Their report would be very helpful to growers at this stage.

The columns of the "Fruit World" are open for the expression of the considered views of growers on this important topic.

### ANSWERS TO CORRESPONDENTS.

#### Working Peaches on Apricot Stock.

H.S.O., Gippsland, asks for advice re budding Peaches to Apricots on a commercial scale.

Answer (by J. M. Ward, Supt. of Horticulture):—The Apricot stock is not recommended for the Peach. The Peach bud does not take readily owing chiefly to the gumming of stock. Then again, the union is not usually satisfactory. The Apricot roots are more sensitive to alkali than the Peach, and under varying soil conditions is not as suitable.

The Apricot can be successfully worked on the Peach, and although not making as good a union as with its own stock, some varieties do well and are more fruitful than when worked on their own roots.

#### Slaked Lime versus Fresh Lime.

The Director of Agriculture (Professor Arthur J. Perkins), replying in the South Australian "Journal of Agriculture," to a correspondent who sought information as to whether slaked burnt lime was as effective as fresh burnt lime for loosening red soil, said:—"Insofar as qualitative effectiveness is concerned, there is no difference between the action of slaked



burnt lime and freshly burnt lime in loosening heavy red soil; as a matter of fact, if freshly burnt lime be applied to the soil it very rapidly becomes slaked by contact with the moist earth. The difference, however, is a quantitative one, and in this connection much will depend on the length of time the lime has been slaked. If you take freshly burnt lime and slake it ordinarily with water, it will increase in weight from combination with the water, so that 1 cwt. of burnt lime becomes 1½ cwt. of slaked lime; at the same time, this 1½ cwt. of slaked lime is no more effective than 1 cwt. of burnt lime. From the monetary point of view, recently slaked lime is worth no more than just three-quarters of the price of fresh lime, and very much less if it has been slaked for any considerable time, because of its tendency to absorb carbonic acid gas."

#### REWORKING KEIFFER PEARS.

##### A Grower's Experience.

Hon. Geo. R. Laffer, M.P., writes from his orchard at Belair, near Adelaide:—I was very interested in reading in the September issue of the "Fruit World," page 415, re working Keiffer Pears, and thought it might be of interest to you if I related my experience.

We have reworked very many Pears, invariably with success. Some years ago I reworked a number of Garbers Hybrid, which, like the Keiffer, is a Chinese sand Pear cross. The Garber is a very strong grower, much stronger than the Keiffer, in fact one of the strongest growers I know. The grafts took splendidly, and the first year grew well, but each succeeding year the growth diminished, until after about eight years they ceased to grow at all. The grafts were put on to the Garber wood, which was worked upon seedling stocks.

I reworked some of the trees again, but cut below the Garber wood, and the trees recovered and did well. Since then I have reworked many Keiffers, but owing to the experience I had with the Garbers, have always cut below the Keiffer wood.

While my experience is with Garbers, I certainly think your correspondent, G.L., Hastings, will be taking a great risk if he cuts the trees down as suggested and inserts the grafts into the Keiffer wood. I would strongly advise cutting below the Keiffer into the original stock. Perhaps some growers in Victoria have had definite experience with Keiffers, but to be of value the worked trees

should be at least two years old. This is purely intended as a word of warning.

#### VICTORIAN FRUIT CROPS.

Report for October, 1926.

THE FRUIT CROP report of the Horticultural Division of the Victorian Department of Agriculture for October is as follows:—

##### Deciduous Fruit.

During the past fortnight, the prospects of the Apple and Pear crop have completely changed. Owing to the ravages of thrip, the leading varieties of Apples and Pears have suffered severely. The Jonathans have suf-

fered throughout the State. Some orchards have suffered more than others, but no appreciable difference in respect to the extent of the damage done, could be noticed in those cultivated, and those not cultivated, at the time when the thrip appeared. It is yet too early to say definitely as to the value of spraying to control this pest, but at the present time there is a marked difference in favor of the sprayed blocks. Nicotine Sulphate and Red Oil mixture have given by far the best results. Apricots set a heavy crop, and are very free from disease. A hail storm early in the month did a considerable amount of damage, but despite this, there should be a good crop. Peaches are patchy, but generally light. Plums, medium to light. Stone fruit, on the whole, will be medium to light. Berry fruits have also been damaged by thrip, and although later blooms may set, the prospects are not good.

##### Citrus.

Navel Oranges from the Kerang, Goulburn Valley and Wangaratta Districts are now coming on the market, and Valencia Late from the Mildura and Swan Hill districts—prices for both varieties are well maintained.

Citrus trees are everywhere flowering heavily, and the prospect of a heavy crop for 1927-28 appears good, providing the thrip, which are in evidence in many districts, do not interfere with the setting.

##### Viticulture.

Spring came in suddenly, the latter half of September being warm. As a result the sprouting of vines was active, and in a general way satisfactory.

October has been cold, and in many places showery, the effect on the vines varying greatly.

The rainfall for the first half of October (1.64 at Rutherglen, is far ahead of that for the whole month in 1925, when only .69 inches fell at Rutherglen.

The frequently recurring showers are favourable to fungous development, and warnings have been issued through the press. Black Spot has shown itself in several districts. Downy Mildew has not yet made its appearance, the cold spell no doubt affording a certain amount of protection. The season promises to be very suitable for fungous growth, and in the absence of preventive sprayings, grave outbreaks are to be feared if showery conditions continue.

"When the 'Fruit World' comes, I knock off the wireless to read it."—E. Weitnauer, Batesford.

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ferred most, and are almost a complete failure. Delicious and Dunn's have also set very few fruits.

Rome Beauty and London blossoms are also badly affected, and although many of the Rome blossoms appear fairly healthy, it is too early to state definitely whether fruit will set. The Apple crop, on the whole, will be very light, and it would appear at the present time that the product this season will not reach 10 per cent. of a normal crop. The Pears are also badly affected, but the failure is not so general as is the case with Apples. There is a prospect of a good to medium crop in the Goulburn Valley. The damage done by thrip is general

# Fruit Crop Prospects

## VICTORIA.

### Ardmona.

Prospects for a good season are not very promising at present.

**Peaches.**—Early dessert Peaches are a failure. Middle season Peaches are going to be a very light crop, including Sims and Phillips Clings. Later varieties of Clingstones will be lighter than last season, but at present it is rather early to judge the crop exactly.

**Apricots** promise well, but recent weather conditions have been unfavorable.

**W.B.C. Pears** showed well, but the crop will probably be below the average as thrips were bad.

Weather conditions have been in favor of all pests and made it very hard to deal with them.—E. L. Young, Ardmona.

### Harcourt.

Unseasonable conditions and thrip have greatly retarded the setting of all fruit and damage cannot yet be estimated.

**Plum** crops will be light to medium; **Pears**, very light; **Apples**, not yet able to tell, Munros look as if they will be a failure; **Nelis Pears** are a total failure. It is too early yet for another fortnight to be able to get any idea of the **Apple** crop, but at present things are not very encouraging.—James H. Ely, Harcourt, 14/10/26.

### Somerville.

The prospects for the coming season in the Somerville district appear to be from a medium to heavy crop.

**Apples.**—The Jonathan being the principal Apple grown here, this variety is looked upon as the mainstay of a successful season or otherwise. While some orchards show a very heavy bloom of this variety, quite a number show the effects of a heavy crop and dry year last season, consequently the trees appear weak, with a very light bloom. I should say there would be a light to medium crop of this variety in this district.

Early varieties, such as W. Favorite, Alfriston, Emperor, appear to be fairly heavy, while Gravenstein appear to be light, some places practically a blank. Later varieties, Statesman, Reinette, Rome Beauty, from good to heavy crop.

**Thrips** caused a good deal of consternation among growers early in the month, and no doubt had the dry spell continued would have done an immense amount of damage; but a downpour of rain just at the right

time checked this pest, and I doubt if its presence in the early stages of blossoms bursting will be felt. Since that rain in early October this district has been subjected to practically continuous rain, and some fine weather would be welcomed.

**Plums.**—It looks as though there will be a fairly heavy crop, with perhaps Grand Duke the exception.

**Apricots** are of exceptional size for this time of the year, and there promises to be a fine crop.

Ploughing in many gardens is completed, and those who have not yet finished are held up on account of rain.

Those who apply the calyx spray will be getting it on first opportunity.

Growers in the district are discussing the Control Bill, the majority not favoring it, from what can be gathered from general conversation.—W. P. Hutchinson, Somerville.

## STOP PRESS.

### Victoria.

*Later (28/10/26).*—Somerville district, blank to light crop. Quantong, light. Diamond Creek, light. Reports from all centres state bad thrip infestation, worse than 1914.

### New South Wales.

Mr. G. D. Ross, Under Secretary for Agriculture, advises 27/10/26. Crop prospects:—Citrus, blossomed well. Apples and Pears, great damage by thrips. Cherries, early vars., light to med.; late vars., med.; Peaches, coastal areas, early vars., heavy; later vars., med. Prunes, good. Plums, med. Apricots, light to good. Grapes, good prospects.

### £50,000 for Tasmania.

The Federal Government has agreed to advance Tasmanian fruit-growers £25,000 as a loan, repayable in five years, the Tasmanian Government having provided a similar sum.

### Death of Sir Henry Jones.

Regret is expressed at the unexpected death of Sir Henry Jones, of Hobart, which occurred at Melbourne on October 29th.

## NORTHERN VICTORIAN FRUIT-GROWERS.

### Crop Prospects and Marketing.

At a conference of Northern Victorian Fruitgrowers, held at Tatura on October 15th, it was stated the marketing scheme financed by the

State Government last season had failed: growers would not risk handing over their fruit to a similar organisation. Tatura and Merrigum each had marketing plans of their own.

Mr. J. A. Rushton, Shepparton, reports under date October 22:—Fruit prospects in the Goulburn Valley are—Apricots, average crop; Pears (Williams), very patchy; Peaches, almost a failure; Vines look well. Thrip very troublesome this year; Orange blossoms full of them: good rain needed.

**Doncaster.**—Apples and Pears are almost a total failure, except a few early blossoming varieties; Peaches practically as bad. I think it was the hot spell in September which brought along the thrip. Doncaster will have a bad time this year.—A. F. Thiele, 20/10/26.

## SOUTH AUSTRALIA.

### Coming Crop Prospects.

Mr. Geo. Quinn, Chief Horticultural Instructor, writing on October 18, says:—The climatic conditions which have prevailed during the past three weeks, whilst supplying the soil with a splendid soaking of moisture, have probably upset the fruit crop prospects somewhat.

Most of our commonly grown fruits have blossomed well, but although somewhat early to estimate, the rough wintry conditions which have prevailed are likely to have seriously affected the settings. In some districts, **Apricots** promise a heavy crop; **Plums** and **Cherries**, which were fair, have been seriously injured by hail storms; the **Pears** have bloomed well and the **Apples** fairly freely. The former should set a fair to good crop, but the Apple trees carried an abnormally large number of fruits last season, although the long dry summer restricted the individual Apples to a very small size in most localities. Unless this dry spell developed the flower buds to an unusual degree in an effort to reproduce again, it is hardly to be expected that the trees will carry a heavy crop this season.

The **Citrus** trees are flowering profusely, and as they are not usually so defined in their habit of cropping on alternate seasons as are the deciduous sorts of fruits, it is possible a good setting may be achieved. At any rate, the **Citrus** trees in most localities are in good heart and capable of carrying a load.

The **vine** fruits are not yet in bloom, but the showing of bunches is from fair to good. Up to the time of writing no frosts have occurred to damage the tender growth.

The **Almonds** have not set well as a rule, and this State's contribution



should not be quite up to normal at the end of the season.

The cold wet weather referred to has made the position in respect to fungus diseases uncertain, and in some vine growing districts, the black spot or anthracnose has made its appearance, whilst fear of an ebullition of the downy mildew has set the vignerons on the defensive with spray pumps and dust guns. The latter are still in the experimental stage, and are being watched with keen interest by fruit and vine growers alike. Should cool, windy, weather prevail during the next few weeks, it is possible all these troubles may be minimised, but hot, still, conditions, will, on the contrary, create favorable atmospheric conditions for the progress of black spot on Apples and Pears, as it does for the anthracnose on the Grape vines.

Notwithstanding the wintry conditions, the spraying against curl leaf has kept the Peach and Nectarine trees fairly free from this fungus. Black aphides are prevalent, but the green species are not as noticeable as during the two previous spring seasons.

#### PROSPECTS AT GRIFFITH, N.S.W.

All fruit crops, except vines, heavily reduced by pests.

The prospects of the coming fruit season are not very bright. The **canning Peach** crop is less than one-half the normal, although there are some good crops on individual farms. Frosts, aphids, and thrip appear to all to be contributory causes to the position.

**Prunes** are very light, and on present appearances the Apple crop is practically a failure; on the other hand the **Apricot** crop is very good, and is double that of last year. **Vines** show promise of a heavy crop, and no disease has yet appeared.

The **Citrus** has blossomed heavily, but it is too early yet to forecast the probable crop. **Thrip** is very prevalent, and may affect the setting of the vines and Citrus. Regarding **Plums**, **Slipstone Peaches**, and the other lines of fruit, they are generally a failure.—W. Moses, General Manager, Griffith Producers' Co-operative Co. Ltd.

#### WESTERN AUSTRALIA.

##### Crops Promising Well.

Although too early to give any estimate of the season's fruit crop in this State, it is interesting to note that stone fruits, citrus, Apples and

Pears are all promising for heavy crops, but the critical period is the setting season. Further advices later.—Geo. W. Wickens, Superintendent of Horticulture, W.A., 21/10/26.

#### FRUIT AT BRIDGETOWN.

##### Coming Season's Prospects.

Even at this early date, the prospects for a heavy Apple crop are very bright, and those growers who sprayed early with oil, claim that they have brought about an early setting of fruit and, the Apples on many of the varieties, so sprayed, are already set, says "The Blackwood Times," of October 1. Generally the trees are a mass of bloom. The damp spring is a big factor in fruit setting by reason of the fact that little or no trouble to date has been experienced with the beetle pest.

So far as prices are concerned, prospects in this direction are also very bright. A number of growers have had offers to dispose of their export lines, on the sidings, at the following prices:—Jons., 6/- a case; Cleos. and Dunn's, 7/- a case.

#### N.Z. CROP PROSPECTS.

Reports from the Teviot district (N.Z.), indicate good prospects for stone fruits.

A good season is expected at Poverty Bay, stone fruits being unusually early. A heavy Pear crop is anticipated.

A fine crop of Lemons was harvested at Huapai, and stone fruits promise well.

#### NEW SOUTH WALES.

##### Fruit Report.

The Department of Agriculture advises as follows in its report for September, 1926:—

**Apples.**—Small consignments of Granny Smith and Yates are still being marketed, and are commanding highly satisfactory prices for the grower.

There is every indication of a good crop of Apples. All the main varieties, such as Granny Smith, Tasma, Jonathan, Delicious, and Yates, have blossomed well.

**Pears.**—The Pear crop promises to be a heavy one. Most of the commercial varieties such as Williams, Packham's Triumph, Winter Cole, Winter Nelis, Beurre Bosc, and Josephine, have blossomed most profusely.

**Peaches and Nectarines.**—In the coastal districts the crop promises

from light to medium. On the Tablelands the indications are that there will be a good crop.

**Plums.**—A heavy crop of Plums is anticipated. The blossoming has been heavy.

**Apricots.**—There is every indication of a good crop of Apricots, particularly on the Murrumbidgee Irrigation Areas, where the bulk of the fruit is produced.

**Loquats.**—Choice Loquats are in good demand at high prices; inferior lines are extremely dull of sale.

**Oranges.**—The marketing of the Navel and common Orange crops is finished, except for minor quantities and crops in special situations which favor longer hanging. Prices for Navels range from 10/- to 15/- per case. The trees are in good condition, but have been blossoming a little irregularly, due to past seasonal conditions. Generally speaking a good setting should result for next season's fruit.

Common Oranges are realising up to 10/- per bushel. Valencia Oranges are about ready for marketing. Prices are likely to be very good. The crop varies in different districts, in most cases being light and in other centres not more than medium.

**Mandarins.**—Mandarins are getting scarce, especially the better quality. Much of the fruit now being marketed is dry in character, having been held too long on the trees.

**Lemons.**—Lemons are selling slowly for most grades averaging about 5/- to 6/- per bushel, but good quality of suitable size is realising up to 8/-. Lemons will probably be worth very much more in a few weeks, for the remaining crop is not a heavy one.

The trees have blossomed profusely and the prospects are that there will be a heavy winter crop next year.

#### DRIED FRUIT TRADE.

##### No Preference on Re-exports from United Kingdom to Canada.

An Order in Council, dated June 25th, 1926, withdraws the benefit of the British preferential tariff from Australian Raisins and dried Currants imported into Canada from the United Kingdom. Australian Raisins and dried Currants, however, may still be imported into Canada direct from Australia free of duty, in accordance with the provisions of the Canada-Australian Trade Agreement of 1925.—"Imperial Food Journal."

Everything depends on the point of view. You couldn't convince a mouse that a black cat is lucky.

# Australia's Fruit Industry.

A Big National Enterprise.

Australia Could Follow With Advantage the Standardised Methods of U.S.A.

"Organisation : Co-operation : Not Government Control."

A Review by W. N. Murray.

WITH an intimate knowledge of fruitgrowing conditions in Australia and New Zealand, and after studying fruitgrowers' organisations in U.S.A. and other parts of the world, Mr. W. H. Murray, of the Vacuum Oil Co., has made certain observations, which, it is hoped, may be of service to the industry here.

In the first place Mr. Murray is convinced that by means of educational propaganda there could be a very big increase in the local consumption of fruit. The cost per grower would be infinitesimal.

In America the planting of approved varieties has been standardised.

## Standard Grades.

"Considerable attention has been paid to grading, and no fruit could carry the wrapping paper of such a brand as 'Blue Goose' unless free of all blemish, true to type, and of high quality. The 'Sunkist' papers demand similar excellence. To care for Oranges, quite wholesome, but having skin blemishes, squeezers (i.e., machines for extracting the juice) have been installed in practically all of the chemists' shops and large business houses. Places like Marshall Fields, one of the largest emporiums of the world, have numbers of squeezers throughout their departments. Millions of bushels are sold in this way.

## Distribution.

"The fruit is sold through a number of channels. Any wholesale buyer will be supplied with any quantity, but the big organisations market most of their fruit through their own channels; that is, they have representatives through all the cities, towns, and villages, who are expected to sell their quota (which is estimated on a population basis, to the local storekeepers. The fruit is sold through every type of shop (not simply 'fruit' shops). The organisations do not go into the open market, but distribute their fruit through the retailers.

## Apples.

"In the Apple-producing centres, the packing house is the standard medium for maintaining grades. I had the opportunity of meeting some 1,800 delegates at Ithaca (N.Y.).

Much money is spent annually in advertising guaranteed brands. The second or third grade fruits are never packed with what has been advertised as a high-grade fruit.

"At Rochester (N.Y.), a buyer who had just purchased 60,000 barrels of 'Twenty-Ounce' Apples, explained to me that the fruit had to be picked and packed under his supervision. The picking has to be done into canvas bags, and each bag is emptied by means of undoing a flap on to a padded bench, no fruit being allowed to drop. It is then in some cases wrapped in oiled papers for export; but fruit for home consumption is packed in barrels—which contain about three bushels—in an unwrapped condition, great care being taken in the packing.

Where this fruit is to be carried a distance by rail, it is placed in a cool store and pre-cooled to a temperature of about 35 to 40 degrees F. It is then placed in trucks which have been chilled per medium of ice being placed in the bunkers at each end of the compartment. Fruit is carried by this means over the railways for distances of up to 6,000 miles, and invariably arrives in good condition.

## Selling Organisation.

"The American plan for selling fruit is very simple. They are high-grade statisticians. The marketers of fruit know the population of every State, county, town and village, and they have a co-ordination of service from the orchard, whether it is situated in California or the State of New York, to the uttermost parts of the United States and Canada. As their home market is the most valued and the easiest to control, they have concentrated to sell their highest-grade products at home.

"At Washington hundreds of scientists devote their lives to study the problems of the various pests, as well as every detail incidental to the growing and marketing of fruit.

## A National Industry.

"The fruit business of the United States is regarded as a national one, as it is in all other countries—excepting Australia. The whole weight of the Federated States being used to see that every phase of the industry, be it transport, cool storage, control of disease, types and varieties, re-

ceives the attention of the most expert brains in the community.

"The above methods have enabled the American people to plant all types of fruit, which are now yielding them: Apples up to 200 million bushels; Pears and Peaches, probably each 20 million bushels; Citrus, probably 40 million bushels, in addition to thousands of tons of vine products.

## What Australia Can Do.

"The United States of America have not the natural endowment for producing fruit that Australia has, and what has been effected in the United States can be accomplished in Australia, and it is incumbent on all fruit producers that they should study the methods adopted in those countries which have been through the vicissitudes now being experienced by Australian growers, but have profited by the experienced and developed their country.

"What intelligent scheme has ever been put forward by the Australian fruit producers to develop their own home markets?

"There is not one single system whereby a continued supply of fruit is maintained from any district in Australasia.

"The other countries of the world invariably call on the public-spirited business men who have obtained note for their selling ability in the various commercial walks in life. I feel sure that the growers of Australia can command from outside business sources the co-ordination and help of our best selling men, and would suggest consideration for standard packages suitable for the various localities where there is insistent demand for fruit in Australia. We have cool storage facilities which will enable Apples and Pears and other types of fruit to be kept for quite a number of months, and if the potential markets of each city, town, and village be declared, and facilities be made for distribution of the various types of fruit to the outback country, the growers will find that they will have to make considerable additions to the plantations to care for any demands for oversea markets.

"We have in our principal cities a million families waiting for supplies of reliable fruit. If we sold them 36



lbs. of dried fruit, 24 tins of canned fruit, 10 cases of fresh fruit per annum, we would not have sufficient to supply the balance of the population, and certainly have nothing to export.

To adequately develop this huge potential market, there is need of—(1) a standard package of the desired size; it is obvious that the bushel case of 40 lbs. is not an economical proposition to a family of four people; and (2) an organisation to maintain a continuous supply for the 12 months.

#### Self-reliance, not "Government" Control.

Summarising his experiences, Mr. Murray states that by standardising varieties in the orchards, standardising the packs, educational propaganda, a national "fruit" conscience has been created. Growers organise into district groups or co-operative packing sheds and sell direct f.o.b. or f.o.r. to buyers (or "jobbers") who operate on an extensive scale, and really act as brokers in the process of distribution through trade channels to the public. There is hearty co-ordination between the growers' organisations and the wholesale and retail trade, a wholesome spirit of self-reliance, and enterprise has been developed; the industry in all its branches, growing, transport, marketing (local and export), being run on business lines without Government interference.

Mr. Murray has given 71 addresses to fruitgrowing communities in Victoria, New South Wales, and Tasmania in the present year; the audience has been most appreciative. Mr. Murray's idea is to get the growers to "think big" in the terms of a national enterprise.

#### PERSONAL.

Fruitgrowers will appreciate the appointment of Professor A. C. D. Rivett, M.A., D.Sc., as Chief Executive Officer of the Council for Scientific and Industrial Research.

The status of Mr. Geo. Wickens, Officer-in-charge Fruit Industry, Western Australia, has been raised to Superintendent of Horticulture.

In recognition of the untiring work of Dr. Geo. E. Payne Philpots on behalf of the health of the Australian people, the First National University of Naturopathy, Newark, N.Y., U.S.A., has conferred on him the degree of Doctor of Naturopathy.

"Naturopathy" is the science—in Nature's way—of gaining and maintaining health, by the use of vitamin foods as opposed to "drugs." In this

## Codlin Moth Control.

Temperature the Deciding Factor in Emergence.

Accurate Data Should be Obtained.

(By L. C. Tonkin, Ettrick, New Zealand.)

From time to time, Mr. Lang, of Harcourt, tries to assist his fellow fruitgrowers by describing his methods of controlling Codlin Moth. He has been assisted by younger growers, such as Mr. Val. Kerr, who are endeavouring to arrive at a Codlin spray programme to suit Australian conditions.

Most progressive growers are subscribers of American fruit journals, and, though we get great help from these, the time has arrived when we on this side of the Equator, must strike out for ourselves, and form our own programmes, the reasons being that, first, Codlin damage is worse there, especially in the Pacific North-West; and, secondly, because the first Codlin brood emerges after blossoming sooner there than under our own conditions.

One thing is certain to both continents, and that is that temperature is a deciding factor in the emergence of the winged moth.

Whether the calyx spray is necessary or not depends on whether the moth has emerged before the calyx is closed or open. Growers should co-operate in endeavouring to obtain a simple method by means of which that time of emergence of the moth can be ascertained. American growers are urged to apply their first cover spray (after the calyx spray) when the temperature reaches 60 degrees at eight in the evening for three successive nights. It was on this method, last year, that the writer endeavoured to find the time to apply arsenate sprays.

A most significant fact was noted. When that time did arrive (60 degrees for three nights) it coincided with the first moths entrapped in jars used by a progressive grower, who is my

neighbour. The date in 1925 was as late as December 20 (Otago, N.Z.). What commercial grower would have been brave enough to leave out a calyx spray and apply a cover spray only then? The season was indeed late, but the trapping of the moths in jars by my neighbour was very successful, and the first moths were caught at that late date, and not before. Nelson jars caught first Codlin on November 24.

It seems, in accordance with Mr. Mr. Val Kerr's reasoning, that the later sprays are important, and thus unlike American conditions, which cause the growers there to be very careful to apply the calyx and first cover sprays at the correct time. With us it seems that the first cover spray is the important one in codlin control, and what is required is a simple method by means of which growers can ascertain the correct time to apply that spray, whether the season itself is early or late.

For 1926 if growers in Australia and New Zealand will try methods in their orchards to find the time of the moth's first appearance, whether by observing larvae in bran or by means of jars of juice, and will publish their observations, then we growers of the South Seas will not be long under the present uncertainty of not knowing whether our arsenate sprays are being applied at the correct time to give the best results.

[We are pleased to publish the foregoing from Mr. Tonkin, who has a 100 acre orchard at Ettrick, New Zealand. Ettrick is eight miles south of Roxburgh, and 90 miles from Dunedin.

Information from other readers on this and other topics would be welcomed.—Ed. "F.W."]

connection fresh fruit and vegetables, wholemeal bread, etc., play an important part.

Dr. Philpots is well known to Australian fruitgrowers because of his able advocacy of the health reasons why people should "eat more fruit." Dr. Philpots is also the editor of the "National Magazine of Health," by means of which publication he seeks to lead people to keep their health by natural means.

Congratulations, Dr. Philpots! May you prosper in your splendid enterprise.

Mr. C. H. Tutton, of the Overseas and Interstate Trading Co. Ltd., who recently returned from a visit to Canada, U.S.A., and England, states that strong light softwood cases are becoming increasingly popular in Australia. In Canada, U.S.A. and South Africa softwood cases are used exclusively for fruit cases.

Herewith sub. for three years' "Fruit World." It is always welcomed.—W. P. Mair, Tyabb, Vic. 6/10/26.

# Western Australia.

Seasonable Operations :: News and Notes

## Seasonable Work for November.

**C**ONTINUE cultivation. The winter rainfall of 1926 has been well over the average in all fruitgrowing districts, and if the top soil from four to six inches in depth is kept in a thorough state of tilth during the summer months sufficient soil moisture will be retained for tree growth and fruit production, even should the summer turn out more than usually dry.

Destroy infested fruit, and bait and trap for fruit flies.

## W.A. FRUITGROWERS' ASSOCIATION.

### Export Control Opposed.

A meeting of the Executive Council of the Western Australian Fruitgrowers' Association was held at Kojonup on September 21, to enable a full meeting being held to discuss the proposed Fresh Fruit Export Control Bill, says the "Primary Producer."

The various provisions in the Bill were discussed, and it was resolved: "That our delegate should oppose the

## CODLIN MOTH OUTBREAK.

### Warning to Fruitgrowers.

The District Orchard Inspector (Mr. A. Flintoff) when speaking at the recent meeting of the Bridgetown Fruitgrowers' Association stated that the Superintendent of Horticulture (Mr. Geo. Wickens) had asked him to bring under the notice of fruitgrowers the seriousness of the codlin moth outbreak. They knew, he said that an outbreak had been discovered at Narrogin, states the "Blackwood Times." He would ask growers if they noticed anything strange in the moth or grub line to immediately report it. It was very discouraging to learn of the Narrogin outbreak, and it was quite possible that the moths had travelled 30 miles east of Collie. He intended keeping a keen lookout at the Nog-



Mr. A. J. Brain's Orchard, "The Pines," North Beaconsfield, Victoria.

Looking towards Gembrook.

Illustration by courtesy "The Leader"

Woolly aphid will show up in quantities this month unless controlled by parasites or spraying; where parasites are not present spraying must be resorted to, or the pest will destroy the young buds and materially interfere with the crop of fruit to be harvested.

Spray for Pear slug this month, using 2½ lbs. arsenate of lead in 50 gallons of water.

Commence thinning fruit this month, beginning with early Peaches and Apricots and following on with Apples and Pears.—Geo. W. Wickens, Superintendent of Horticulture, in "Journal of Agriculture."

Bill in its present form, but if a Bill is inevitable he should strenuously fight for an Organisation Bill on the lines of our own suggested State Bill."

Mr. J. McN. Martin, President of the Mount Barker Fruitgrowers' Association, was appointed official representative of Western Australia at the conference called by the Minister for Markets and Migration, and it was resolved to ask Mr. F. E. S. Willmott, of Bridgetown, to accompany the Chairman.

gerup end of his district. It would be a national disaster if the moth became established in the State, for, in the first place, it would allow the Eastern States' Apples on the local market.

## PERSONAL.

Mr. A. T. Booth, Hon. Secretary of the W.A. Fruitgrowers' Association, intends contesting the Albany seat at the next State elections in the interest of the Country Party. Mr. Booth arrived in Western Australia from London in 1910, and purchased



an orchard property in Mount Barker. Later in the same year he was appointed Hon. Secretary to the Mount Barker Fruitgrowers' Association, which position he has held ever since, with a break of 18 months while he was in Perth acting as the first Secretary to the Associated Fruitgrowers Ltd.

In 1918 Mr. Booth assisted in the formation of the Mount Barker Fruitgrowers' Cool Storage Co-operative Society Ltd., and has been Secretary and Manager since the foundation.

#### FRUIT AT PERTH ROYAL SHOW.

The Perth Royal Agricultural Show, held the first week in October, was an outstanding success, record receipts and notable improvement in numerous sections being shown. Of the fruit classes the "Western Mail" says:—

There was an excellent display of Raisins, both pudding and dessert, Currants, Sultanas and dried fruits,

COVENT GARDEN,  
LONDON

**Ridley, Houlding  
& CO.,**

Large Receivers of Australian  
Fruits.

Solicit Consignments of

**Apples, Pears, &c.,**

Best market prices and prompt  
account sales returned.

Correspondence invited.  
Representative in Victoria

THE

International Fruit & Mercantile Co.,  
410 Flinders Lane, Melbourne

MURDOCH BROS., Hobart

but competition was weak. The Swan Valley was, as usual, prominent in most classes. Mr. A. R. Boxall and Mr. Marshall, with Mrs. Raven, being again leading prize-takers. Although late in the season, some splendid Oranges were shown by Mr. R. Hal-leen, of Walliston, Darling Ranges, who gained nine first and four second prizes, and Mr. L. S. Payne was awarded first for collection of Oranges and Lemons.

#### W.A. NOTES.

Efforts are being made by the Mt. Barker and Bridgetown Fruitgrowers' Association to secure the withdrawal of the recent rise of 3d. a dozen in railway freight on shooks.

The new Western Australian Agricultural College at Muresk, to be

opened on October 30, is one of the most up-to-date in Australia. The estate consists of 2,222 acres, situated nine miles from Northam, and the initial accommodation provides for 50 students.

#### NEW SOUTH WALES.

##### Proposed Dried Fruit Control.

In reply to a question recently, the N.S.W. Minister for Agriculture (Mr. Dunn) stated that members had frequently represented the need for legislation to control the export of dried fruits from New South Wales.

"That proposed legislation has been opposed by other growers throughout New South Wales because N.S.W. produces 1,600 tons of dried fruits per annum and consumes 4,000 or 5,000 tons. It is therefore considered by many that the home market is the better market. The growers on Murrumbidgee Irrigation Area have promised to take a ballot. A ballot is not to be taken elsewhere because the other growers are favorable to legislation. If the ballot is favorable I will at once introduce legislation and pass it into effect."

#### THE STARLING PEST.

##### Recipe for Poisoning.

(By J. Mackereth.)

In the course of a short address at the Viticultural Congress, in Sydney, on August 17, Mr. J. Mackereth, of Avoca, Victoria, gave details of measures taken by him to deal with the starling pest, which does so much damage to the Grape crop in the various States.

The recipe he gave was as follows:—Take 5 lbs. of Wheat,  $\frac{1}{2}$  pint of "S.A.P." (a trade preparation of a highly poisonous nature),  $\frac{1}{2}$  lb. brown sugar (about four heaped tablespoonsful),  $\frac{1}{2}$  lb. treacle. Dissolve the brown sugar in about half a pint of boiling water; add the treacle, make

(Continued at foot of next column)

#### Classified Advertisements.

##### Wanted and For Sale.

Prices for Advertisements under this heading are as follows:—

Casual Advertisements, one to six words, 2d. per word. Contract Advertisements, twelve months, 1½d. per word.

##### FOR SALE—RARE CHANCE.

Orchard (12 acres), boarding house, Post Office and mail contract. All one going concern. Orchard quite up to date. Best varieties Apples, Pears, Peaches; all young trees in bearing. Near splendid local market, and within 45 miles Melbourne; good road. Assured income apart from orchard. Price, terms, "Genuine," "Fruit World."

Country Agents Wanted in various centres in New South Wales, who are in a position to successfully handle a line of efficient orchard spraying equipments.—Apply "Sprayer," Box 3024, G.P.O., Sydney.

#### To Orchardists

Send for Prices of the

**"Bave-U" Sprayer**

to

**E. ROBINSON**

**333 George St., SYDNEY**

up to a pint with cold water, and add the "S.A.P." Stir this mixture into the Wheat, and let it stand for two or three days, stirring it occasionally. When the Wheat has absorbed all the water it will be sticky. Then dry off with fine pollard to make the grains separate.

The procedure followed by Mr. Mackereth was to note the early morning feeding grounds on the grasslands adjoining his vineyard and to distribute the poisoned wheat there before sunrise. This, he said, he found most effective, not only for starlings, but also for sparrows and rabbits. He emphasised the warning that great care should be exercised in dealing with the poison, owing to its deadly nature, in order that the risk to other birds and animals should be minimised.—"Australian Brewing and Wine Journal."



GIBBS, BRIGHT & CO.—See Page XIV

# Fresh Fruit Export Control

Proposed Bill Amended.

Tasmania Does Not Approve of Reduced Representation.

**A**N Interstate Conference, convened by the Minister for Markets and Migration, Mr. Paterson, was held at Melbourne on October 14 and 15. The proposed Fresh Fruit Export Control Bill was the principal item discussed.

Delegates attended as follows:—South Australia, Messrs. J. B. Randall and W. L. Summers (Secretary to Minister for Agriculture); West Australia, J. McN. Martin and F. E. S. Willmott; Tasmania, N. Campbell, M.H.A., and J. P. Piggott, M.H.A.; Victoria, Dr. Soilleux and J. H. Lang; Queensland, W. Ranger; New South Wales, N. H. Case.

Owing to illness, Dr. Soilleux retired at an early stage, and his place was taken the next day by Mr. C. H. Jost (Quantong). In addition there were present Messrs. F. Peacock (Tasmania), P. H. Thomas (Fruit Expert, Tasmania), J. M. Ward and E. E. Meeking (Victorian Department of Agriculture), W. J. Allen (N.S.W. Department of Agriculture), Mr. H. Souter (Department of Markets).

The Hon. T. Paterson presided, and during his absence Mr. E. J. Mulvaney (Secretary to the Markets Department), took the chair.

The proceedings were in private, no members of the press or the public being present. Statements for the press were issued each day by the Department.

The whole of the first afternoon was taken up discussing the principle of control. Dr. Soilleux (who had left a private hospital to attend the Conference, vigorously objected to the principle. He became ill again and had to return to hospital. The principle of control was finally adopted, Dr. Soilleux vote being recorded in opposition.

The draft Bill previously submitted was amended, limiting its operations to three year periods at the end of which 300 exporters can demand a poll for its discontinuance; the voting at all polls to be limited to occupiers of orchards from which 100 cases were exported during either of the two preceding years. The tenure of the members of the Board to be for three years.

The proposed Bill only applies to Apples and Pears; all fruit shipped to the East is excluded.

F.O.B. and C.I.F. Sales.

A motion was adopted, having the effect of preventing any condition in the licence to be issued which would cause the discontinuance of f.o.b. or c.i.f. sales.

Constitution of Board.

Considerable discussion took place over the question of representation.

It was finally decided that there be one representative each from Victoria, South Australia and West Australia, two from Tasmania, and one from N.S.W. and Queensland combined, together with one man of commercial experience to be appointed by the Government.

The proposed Bill, as amended, was adopted, Tasmania and N.S.W. voting in the negative.

## PUBLIC MEETING.

I hereby convene a public meeting of Victorian Apple and Pear growers for Thursday, November 18th, at the Employers' Federation, Collins-street, Melbourne, at 2 p.m.

Business:

- (1) The proposed Fresh Fruit Export Control Bill.
- (2) The Thrip pest.
  - (a) Survey of damage
  - (b) As affecting cool stores.

G. SOILLEUX.

772 Burwood Road,  
Upper Hawthorn.

The levy was fixed at 1d. per case.

Other resolutions commended the present system of fruit advertising in Great Britain, the amendment of the "plain" grade to include a blemish on each specimen in the grade; that the sizing be amended, allowing  $\frac{1}{4}$  inch above or below the size instead of  $\frac{1}{2}$  inch as previously; that only fruit actually affected with San Jose scale shall not be exported; that the German duty on Australian Apples (1/6 per case higher than the duty on American Apples) be brought under the notice of the Federal Government.

In regard to the liability for prosecution of either grower or agent for a false declaration re fruit intended for export, the Customs Department said it desired to sheet the offence home to the person responsible.

The Minister Thanked.

At the conclusion of the Conference, delegates waited on the Minis-

ter (Mr. Paterson), thanking him for his courtesy. Although the proposed Bill was not unanimously adopted, Tasmania desiring bigger representation, the proposals would be put before growers, and the Minister advised whether the growers desired the legislation.

The Minister congratulated the delegates on the work accomplished, and said the Department would do everything possible to assist the industry.

## EXPORT CONTROL OPPOSED.

Appreciation of Dr. Soilleux.

Dr. G. Soilleux, of Wantirna, who was appointed at a recent large meeting of Victorian fruitgrowers to fight against the "export control" proposals received, prior to the recent conference, letters from the large growers and Associations (representing 3,424 acres) supporting his attitude, also a petition from the Pakenham district, signed by 40 growers, representing 611 acres, opposing the proposed Control Board. The latter stated "95 per cent. of the growers in this and surrounding districts are absolutely against any Control Bill: with a little more time available, this list would have an additional 50 names." Since the Conference other letters from different parts of the State, were received by Dr. Soilleux in a similar strain.

Appreciation is expressed for the action of Dr. Soilleux in leaving a private hospital to attend the Conference on behalf of those who expressed confidence in him. Although having had to return to hospital during the first session, it is pleasing to know that the doctor is steadily on the way to recovery.

## VOTING IN VICTORIA.

Big Majority Opposes Control.

A statement setting out the arguments for and against export control was circulated broadcast to Victorian growers recently. Voting papers were included. Progress voting was recorded last issue. The latest figures are:—

For control—61 growers, representing 960 acres.

Against control, 767 growers, representing 12,288 acres.

As there are 1,000 "export" growers in the State, the above-mentioned poll is deemed to be a fair indication of the attitude of Victorian growers on this subject.



## Export Control Board for Apples & Pears

(By Jas. H. Lang)

**N**O SUBJECT that has been brought up during recent years in the fruitgrowing industry has aroused so much discussion as this. It is well that the matter should be thoroughly discussed and viewed from all angles. Criticism of proposals brought forward, even though it be hostile and destructive, is, after all, better than apathy. It shows the growers generally are taking an interest in the welfare of their industry and are more likely in the end to make a forward move.

Whether the Executive of the Apple and Pear Growers' Association were justified in bringing the subject forward as they did I do not now intend to discuss, but their action certainly brought the proposed Board into the sphere of practical politics, and well under the notice of the growers, on whom, in any case, the final decision, yea or nay, will rest.

### The Draft Bill.

The criticism of the first draft Bill brought out what the growers thought to be the weaknesses of that measure, and thus strengthened the hands of their delegates at the recent conference, and the draft Bill, when re-submitted should be much more acceptable to the Victorian growers than formally.

One objection to the whole measure raised by some, is that it emanated from a Government Department and not from the growers themselves. But one must remember that the Government has been constantly asked for assistance by the Apple growers of Tasmania in this and former years, and only three years ago certain Victorian growers were advocating an export bounty.

We know it is the expressed policy of the Government

to help only those primary industries that are adequately organised, so that the assistance rendered may place the industry on a permanently profitable basis. Therefore, with these repeated requests from the Apple growers, it was only natural that the Government should take some action, and the scheme was evolved, not to give financial assistance, but to give by legislation, the power to the growers to combine and manage their own affairs, through their own representatives elected by themselves.

It was not Government interference in the trade, but an honest at-

tempt to help the fruitgrowers to help themselves.

Listening to the discussion of the delegates at the recent conference, one wonders if, even supposing the proposed Board were set up and proved a dismal failure, conditions could be worse than they are at present.

### The constitution

of the proposed Board was the one point on which the delegates at the recent conference failed to agree. Tasmanians were insistent that they were entitled to three, the other States were not prepared to concede them more than two, with one each to the mainland States, Queensland, which does not at present export any Apples, being attached to New South Wales. In addition to these fruitgrowers' representatives there will be one of commercial experience appointed by the Government.

### Much of the success

of the scheme will depend on the personnel of the Board, but can any sane person imagine a Board so constituted doing anything to jeopardise the success of the industry.

Surely there are men in the industry who possess the confidence of the growers (as growers are under no necessity to elect growers to the Board), who have the ability to exercise such control and supervision over the export trade, as must ultimately be beneficial.

At present control and supervision are exercised by a Government Department under regulations; surely a Board elected by the growers would be able to give better satisfaction and insure more sympathetic administration.

### The chief amendments

made in the draft Bill are that only those who have a direct interest in the export trade are entitled to vote, either for the adoption of the Bill or election of members of the Board; a grower, for the purposes of the Act being defined as the occupier of an orchard from which 100 cases were shipped in either of the two preceding years.

Also the operation of the Act was limited to three years at the end of which period three hundred growers can demand a poll to decide whether it should continue or not. The act cannot come into operation or continue for a longer period than three years without the approval of the exporters. In the first place a majority

of export growers must vote it in and facilities for review exist at the end of every three-year periods.

### Safeguarding f.o.b. Interests.

A clause has also been inserted to safeguard the interests of f.o.b. or c.i.f. buyers, and the Act will not apply to Eastern countries where the Australian Apple trade is small and more or less in the experimental stage. The maximum levy chargeable was fixed at one penny per case.

No one denies the necessity of better organisation among the Apple growers, but can this be accomplished without assistance from the Government? I think not. In the near future outlets must be found for a much larger quantity of Apples and Pears than are at present exported. It is stated that with a proper system of distribution, England alone could consume two or three times the quantity at present sent, without materially reducing the price. It was not the quantity shipped to England last year that caused the reduced prices, but the strike that delayed deliveries, thus allowing fruit to deteriorate, and also reduced the spending power of the people.

### Distribution in England.

Though one does not anticipate undue interference with the trade in England, the London Committee, by conferring with the agents, could insure a better distribution, and it is likely that some fruit would be placed by growers at the disposal of the Board for transmission to the best market.

It must not be forgotten that it would be the policy of the Board to protect the interests of the growers and not to break down existing agencies and methods of distribution.

The agents and middlemen form a necessary link in the present system of trade, and one who argues for their entire abolition is on a mental equality with the person who, when sick, sent for the undertaker—he cut out the doctor as an unnecessary middleman.

It is impossible to cover all the ground in an article of this kind, but I can honestly commend the scheme to the growers for their thoughtful consideration and approval.

It cannot be said that present conditions are incapable of improvement; there may be some risk in a forward step, but is not that risk worth taking in view of the results that can be achieved?

### The keynote for success

in all co-operative efforts, for such this is, is mutual confidence and earnest endeavor to attain a common object, in this instance, the placing of

the Apple and Pear export trade on a satisfactory basis.

As much of the past criticism has been due to a lack of knowledge of what is intended, should any body of growers desire fuller information; if they communicate with the Apple and Pear Growers' Association, every endeavor will be made to send a speaker to a meeting called for the purpose of discussing the proposed Bill.

### FRUIT INDUSTRY CONTROL.

#### A Queensland View.

Mr. Munro Hull, Eumundi, Queensland, writes:—I have just been reading your points on the proposed Fresh Fruit Export Control idea, and there is something so painfully familiar therein to the Queensland grower, that I venture to suggest that southern growers will be wise if they profit by Queensland's painful experience and have absolutely nothing whatever to do with any semi-Government control affairs, run by "Boards."

Queensland growers listened to just the same beautiful "word-pictures" that are being screened for southern growers, and we "fell to it," heart and soul.

#### But what an awakening

we got, when we found that in spite of all the talk about growers controlling their own affairs under a co-operative organisation, we were saddled with a Fruit Marketing Act, which strictly confined the duties of our local Associations to "the preparation, packing, grading, and inspection of fruit for market," and an attempt was made to induce local Associations to adopt a set of model rules (model rubbish!) which would have made even our Russian lunatic Lenin blush.

Fortunately for us, other existing legislation enabled us to contract ourselves out of the model rules, else we fruitgrowers would have become mere employees of the "Board," which, when once elected, had a free hand for three years.

The first thing this "Board" did, was to establish a retinue of retainers that cost about £10,000 per annum—which, I note, is sufficient to finance the Butter Board, which deals with the whole Australian export!

Our "Board" Created Monopolies both at home and abroad, with the inevitable result—fixed prices, at less than production costs. Then growers awoke, and their appeal to the High Court gave them back their freedom,

but the growers had to foot the bill of £3,000 that the "Board" had to meet!

Southern growers should retain control, and most certainly, they will lose even their freedom of action if they delegate their inherent freedom to any elected body.

Queensland Banana growers submitted to appalling losses from the operations of their "Board" for over two years, and then they rose en masse, and despite the provisions of the "Act," have taken over the control of their industry, wiser, and poorer, by fully half-a-million of money, which was lost to them through limitation of agents and the loss of the 40 per cent. rebates on railway freights.

The agenda paper has been previously submitted to all the local Associations, duly discussed, and each delegate instructed accordingly. Finally, all that is needed to complete the finest piece of co-operative machinery hitherto conceived in this State, is a central Executive to run the necessary staff, and to see that the decisions of the Sectional Councils are put into operation. A "Board" with discretionary power must render all existing co-operative machinery useless.

At present Queensland has a Committee of Direction which may consult the Sectional Councils, and is armed with executive authority so drastic that it is not game to exercise it, after its awful smash when it got foul of "interstate trade," and



Packing Fruit for Export.

There is only one way for fruitgrowers to control their own industry, and that is, by organising each growing centre into local associations, each such association to send a delegate (or more) to a Sectional Council (each Sectional Council here deals with some one of the various classes of fruit grown—thus Bananas, Citrus, Pines, Deciduous, all have their own Sectional Council). Thus mutual interest is assured.

These Sectional Councils meet quarterly to deal with an agenda paper consisting of proposals submitted by the various local Associations.

now that the Banana Council has decided to finalise all Banana matters (including the disposal of 80 per cent. of C.O.D. revenue and funds), the C.O.D. has but a very short time to live.

As an effort to enforce semi-Government control and compulsory co-operation, Queensland's "Fruit Marketing Act" should be worth a mint of money to southern growers—that is, if they read the lesson aright and have nothing to do with "stunts" which will operate outside the grower's own control. Remember this—delegated control implies servitude.



## New South Wales.

### Producers' and Consumers' Conference News and Notes.

#### N.S.W. PRODUCERS' AND CONSUMERS' CONFERENCE.

A CONFERENCE representing producers and consumers, called by the Minister for Lands, was held at Bathurst, N.S.W., from September 21 to 25. Committees were appointed to handle the different problems, the reports being co-ordinated by an Executive.

The principle of collective marketing and distribution was generally favored, producers to indicate by ballot if their particular product should be controlled by a Board, with representation of consumers.

#### Citrus Fruits.

The Committee recommended the encouragement of increased consumption by advertising, education, and easier access, the Railways, Education, and Health Departments being invited to co-operate. The enforcement of grading regulations and encouragement of hawkers was recommended, also the prevention of the use of synthetic substitutes for fruit juices in beverages. The reorganised Fruitgrowers' Federation should be recognised as the ruling body in the industry, and financed from the orchard tax. Improved distribution should be through packing houses and Associations. The Government should reorganise the rural bank to finance the building and equipping of packing houses, and also assist in research re grading, packing and preserving fruit. Marketing should be left in the hands of growers and distributors.

#### Deciduous Fruits.

The Committee recommended that producers be organised into local co-operative societies for the sale of products and the purchase of requisites, and the creation of more facilities for the handling, processing and preservation of perishable products. The creation of suburban markets in large consuming centres was recommended. The removal of the existing city markets to another site was considered imperative. Continuous plantings of timber suitable for case making was also recommended.

#### Vine Fruits.

The Committee recommended the formation of a Board to investigate the growing of wine Grapes and making, marketing and distribution of wine.

#### Dried Fruits.

The Dried Fruits Committee urged increased consumption, particularly of Prunes, people being educated to the uses of dried fruits; the introduction of legislation for control of export on the lines in operation in South Australia and Victoria; control to be established only after an affirmative vote of growers of each variety concerned; enquiry into existing distribution systems; fostering of co-operative organisation by producers and consumers; organisation of Prune growers and scientific research.

The Minister expressed his satisfaction at the results achieved by the Conference, and stated his intention of preparing a Bill to give effect to the resolutions.

### Brand Your Fruit Cases and Bags

with

### CALDWELL'S STENCILLING INKS

(In Cakes and Liquid)

#### QUALITY UNSURPASSED

Obtainable All Merchants

Local Agents Wanted

CALDWELL'S PTY. LTD.

Yarra Bank Road

South Melbourne, Vic.

#### CURLWAA IRRIGATION AREA.

#### Vines, Citrus and Apricots Show Excellent Promise.

During the three months ended September 30 the weather was mild, with the exception of a few frosts. The total rainfall for the period was 324 points—46 points in July, 154 in August, and 124 in September.

Vines, Citrus and Apricots show every indication of a splendid crop this year. The Citrus blossom is excellent and in the case of Sultanias there has been a splendid bud burst. The growers are pleased with the prospects for the coming season. Citrus prices fell for a time during the quarter, but have now risen again

and are averaging 14/- per case, picked cases bringing as much as £1 per case.

The absence of insect pest in the area is very noticeable; some holdings which previously showed red or brown scale are now practically free. The lining of the supply channels with concrete to reduce seepage losses has been practically completed.

The first watering of the season was commenced on August 26, but the pumping had to be stopped on the 29th of that month, as settlers could not furrow out owing to the heavy rains. Pumping was recommenced on September 21.

Following upon the round table conference with the settlers some months ago, and which, in the absence of Mr. Dunn (Minister for Agriculture and Chairman of the Water Conservation and Irrigation Commission), was presided over by Mr. Loughlin (Minister for Lands), a Committee was appointed to enquire into the cases of some of the civilian settlers who made application to have their holdings classified. This Committee is now sitting at Curlwaa.

#### CODLIN MOTH IN N.S.W.

The N.S.W. Department of Agriculture has drafted new regulations for the control of Codlin Moth, which are described as "drastic." These were considered at a meeting of the Fruitgrowers' Federation, being criticised as impracticable. The subject of bandaging created much discussion, some growers favouring the method, and others describing it as a farce.

The matter was further discussed at a meeting of the State Fruit Advisory Board, when the Fruit Expert (Mr. W. J. Allen) said bandaging was necessary in the interests of the whole of the growers.

It was eventually agreed that the clauses relating to bandaging be referred to the department with the proposed amendments, and that special reference be made to those districts in which it has been proved that the moth can be controlled without bandaging.

**Batlow Agricultural Show.**—The annual Show of the Batlow (N.S.W.) Agricultural Society has been fixed for Tuesday and Wednesday, March 15 and 16, 1927.

**Orange (24/10/26).**—The Cherry crop is expected to be lighter than last year, when heavy yields were obtained. Plums appear light; stone fruits generally promise well.

## N.S.W. FRUITGROWERS' FEDERATION.

### Co-operative Societies to be Formed.

#### Central Depot in Sydney.

At a meeting of the Yanco Fruit-growers' Association on October 12, Mr. Enticknapp, the deciduous fruit delegate to the Bathurst Conference, reported that, seeing that the Government advanced £500 out of the orchard tax to the Fruit Growers' Federation and that all growers therefore automatically become members of the Federation, the Federation was asked by the Conference to organise right throughout the State with the view of getting growers into co-operative societies for the handling of their products. It was consideration that such organising also should comprise the forming of a central depot in Sydney to facilitate the handling of fruit, and the bulk buying of spray materials, implements, manures, etc.

### GRIFFITH CO-OPERATIVE SOCIETY LTD.

#### Satisfactory Progress.

The 19th and 20th half-yearly reports and balance-sheets of the Griffith Producers' Co-operative Society Ltd. indicate satisfactory progress. The balance available for distribution on June 30 was £1,374/11/3, and deposit interest having been provided for, a bonus of 7½ per cent., or 1/6 in the £ was paid on members' purchases for the year, with interest at 6 per cent. on shares. This left £217 to be allocated for immediate building operations and extension of trading departments.

The Yenda building was sold, the final loss of £210 being written off. Total membership on June 30 was 518, a net increase of 55 for the year. The shareholding was then £3,503, and the response to the appeal for additional shares was very satisfactory.

Deposit accounts stood at £5,011. Debts to merchants at £162 left £4,073 of stock free from debt; bank balance and bank deposit totalled £3,239, cash and stock, together at £7,312, giving splendid cover to depositors.

Sales for the last half-year were £15,845, or £882 above the previous half-year, the gross profit being 19.3 per cent. The net surplus of 8.63 per cent. on sales was a very small decrease on previous figures. Stock was at capacity limit of the buildings.

Buildings, plant and fixed assets were at £2,431. Plans for the new building facing Banna Avenue were

in hand. The Society was now registered under the Co-operative, Community Settlement and Credit Act, 1923. The reserve for income tax required less attention, as sales to members were now over 90 per cent. of the whole.

## SHIP YOUR FRUIT TO GERALD Da COSTA



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Importers and Distributors of  
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#### London Branches:

##### COVENT GARDEN MARKET:

Floral Hall,  
8, Russell Street,  
524, Central Avenue,  
151, English Flower Market,  
31 and 32, Foreign Flower  
Market.

Apple Warehouses: — Jubilee  
Market.

##### SPITALFIELDS MARKET—

Stand Nos. 151, 152 and 153,  
and 54, Brushfield Street,  
E.1.

Apple Warehouses: — Church  
Passage, Spital Sq., E.1.

##### BOROUGH MARKET—

3, 4 and 5, The Arcade, S.E.1.

##### G.N.R. POTATO MARKET—

Stand No. 3 King's Cross,  
N.1.

#### Provincial Branches:

**LIVERPOOL**—13 and 17, Victoria Street.

**MANCHESTER**—(Facing Commercial Salerooms),  
Deansgate.

**HULL**—17, Humber Street.

**SOUTHAMPTON**—(Facing No. 45 Shed).

### ENTOMOLOGIST FOR THE M.I.A.

Orchardists on the M.I.A. are urging that a resident entomologist should be stationed on the Area, where much damage has been done by aphid and thrip this year. It is estimated that the Peach crop will be reduced by half.

## COMMONWEALTH CITRUS RESEARCH STATION.

### Successful Field Day.

The first annual field day at the Commonwealth Citrus Research Station at Griffith, N.S.W., was well attended, great interest being shown in the experiments.

Amongst the most important work undertaken was that of improving and standardising the types of Oranges, particularly the Washington Navel and Valencia Late. Selected buds from the best Orange trees were placed in nursery stock in the autumn of 1924, and in the spring of that year the trees were planted out as dormant buds. About 40 trees of each of the nine strains of each variety were used. When the trees come into bearing the different strains will be compared, and the value of the parent trees for propagation purposes thus tested. The scope of the work has been extended since 1924, and now includes trees from the coastal districts of N.S.W. and the Victorian Murray River settlements, the latter being regarded as particularly promising.

In addition, comprehensive experiments with fertilisers and green manuring are being carried out.

### EFFECTIVE SPRAY FOR THRIP.

Considerable damage from thrip is reported from the Apple and Pear-growing districts of New South Wales.

The Field Officers of the Entomological Branch of the N.S.W. Department of Agriculture have been experimenting with sprays and dusting. The entomologist (Mr. W. B. Gurney) recommends a spray of 1 pint nicotine sulphate, 3 pints red oil, 100 gallons water. Mr. Gurney states that this has proved destructive to the pest; one or two applications should be effective. He suggests that growers should give two sprayings, preferably in the late pink stage, and again about four days later, when the blossoms are fully open. Use a power sprayer if possible at a pressure of 200 lb., to ensure the penetration of the spray between the buds and into the blossoms.

### A GROWERS' SELLING FLOOR.

The Batlow Packing House Co. has taken a store in the City Markets in Sydney for the sale of its fruit for members. Mr. H. G. Ward, late manager of the packing shed at Batlow, is in charge of the selling floor.



# Research into Fruitgrowers' Problems

Science Will Bring Many Improvements

Pest Control : Refrigeration : Hybridising : Transport

THE valuable address, by Professor Rivett, at the September meeting of the Victorian Fruit Council, in which he outlined the work of the Council for Scientific and Industrial Research, and the proposed investigation of problems affecting the fruit industry, was reported in our last issue.

Following Professor Rivett's remarks, members brought forward various problems which needed solution. Questions to which an answer was required were whether the continuous use of Bordeaux mixture affected the life of the trees; whether the arsenic in lead-arsenate sprays, being an indestructible article, would in time affect the soils; whether it was better to use warm or cold water for irrigation, and in large quantities at long intervals or small supplies more frequently. Mr. Tully expressed the opinion that the conference was of very great importance, and he hoped it would be the first of a series which would lead to great good for the industry.

## Refrigeration.

Mr. Lang stated that until recently pure science had done nothing to help solve the problems of refrigeration. The result of the experience of practical men had given the scientists a good jumping-off place.

Prof. Rivett added that in research of this nature, it was necessary to start at the very beginning. At the Cambridge Research Station, they had started experimenting with the refrigeration of beef, but now they were working on gelatine, to determine the behavior of the most elementary cells.

## Disease Resistance.

Mr. Lang mentioned the fact that some varieties of Apple trees were proof against the attacks of woolly aphids, others were highly resistant, and some very susceptible. But in the case of susceptible varieties, it often happened that one or two trees in a block, say of Cleopatras, would prove either immune or highly resistant. Apparently they were growing under the same conditions, on the same stock, and produced the same class of fruit. Mr. Wickens, Fruit Inspector in Western Australia, had stated that in one orchard there, there were a few Cleopatra trees that were practically immune. He had introduced branches from other trees heavily infested with woolly aphids into these trees, but could not obtain

infection. Why? In regard to the temperature of irrigation water, Mr. Lang stated he had found no difference from the use of water from a spring and from a shallow irrigation channel, where the temperature was probably 15 to 20 degrees higher than from the spring.

## Growers' Experiments.

Mr. F. Thomas (Bunyip) referred to the conflicting and inconclusive nature of experiments conducted by growers, who were not scientifically trained for the work. They accordingly ascribed results to conditions which might not really influence them. The grower was always experimenting, but he rarely carried out one experiment over a sufficiently long period to obtain reliable results. Seasonal changes, and variations from year to year seemed to have such a tremendous influence on the problem of raising fruit. There was urgent need for men with time, money, and proper training to investigate these problems. One important problem was the selection of the right time to pick. Growers knew there was a right time, and if they had a rough rule to guide them, it would be worth

hundreds of thousands of pounds to Australia. Mr. Thomas suggested that the Fruit Council should send in a report indicating what were some of the problems that needed immediate attention, and ready assurance was given by all present that plenty of orchards would be available for experimental work, and orchardists would give all assistance in their power.

## The Root Borer.

Mr. R. M. Finlay (Diamond Creek) said that in his district shortly, no one would need to worry about manuring or any other problems if the root borer was not stopped. It was killing out the trees, and in some districts was the most serious problem.

Mr. Lang stated that Mr. Levick, of the Department of Agriculture, was conducting experiments in regard to root borers. He had stated that if the tree could be kept alive long enough, it would form new roots, and he intended experimenting with subsidiary roots from a young tree planted alongside and head-grafted into the old one.

Mr. Tully said he had been recommended to try bi-sulphide of carbon. It killed the root borers, and the trees as well. He emphasised the multiplicity of varying conditions the orchardist has to deal with.

## Problems Needing Solution.

The Secretary (Mr. R. E. Boardman) raised several problems which were in urgent need of scientific study. Among these was the introduction of new varieties of commercial fruits which had been developed in other countries, and varieties immune from certain diseases. For this purpose a plant quarantine station was urgently needed. Work was also needed in crossing varieties to produce superior qualities in any particular line. Bunchy top in Bananas, Tomato wilt, the Pea mite, and natural parasites for various pests were mentioned. More information was needed in regard to pollination. A serious rot of soft fruits had caused great losses, and had been traced to infection by the transit fungus in packing sheds and railway trucks. The nature of brown heart in Apples was a discovery of pure science, found by examining the transpiration of a Sunflower. Professor McAlpine's work in regard to bitter pit was valuable. In regard to the published reports of ship-board temperatures, Mr. Boardman considered these unreliable, as the work was without system. Transport of Citrus fruits needed investigation. The Americans travelled Citrus fruits from the Californian coast through the Panama Canal to Liverpool—8,000 or 9,000 miles—and landed it in perfect condition.

Mr. Lang said that in regard to pests, we did not know the a.b.c. of orchard sanitation. Mr. Lawford, of Doncaster, had told him recently that in his cool store he found the fruit in some cases decayed more than in others; he proved that these were the cases in which the rejects had been stored the previous year. He had now cut out using cases for rejects.

Mr. Rushton referred to the attacks of green aphids, and how one man who took every possible care of his orchard, had scarcely a leaf left on the place; a careless grower across the road, who never ploughed and never sprayed, had not an aphid.

## Work Now in Hand.

Professor Rivett stated that at the present time an enquiry was being conducted as to the particular researches undertaken by the various Agricultural Departments, and their scope; the Council would then know just what was being done. Regarding the Pea mite, Mr. Gerald Hill was to start on his investigations immediately. The investigations in regard to bunchy top were practically completed, and the report and recommendations of the Committee published. But this showed the limitations of the

Science Council, they had no power to put these recommendations into force. It remained for the State Governments to put into operation administrative laws. The regulations were pretty drastic, but they were necessary.

Similarly, quarantine did not come within the scope of the Council for Scientific and Industrial Research, which was an investigatory body, and must not encroach on the administrative functions of the State Governments.

Professor Rivett said reference had been made to Tomato wilt. Some of these diseases were getting a serious hold in Australia, and the Council had completed arrangements with the Peter Waite Institute, in South Australia to build a glasshouse, insect-proof as well as bird-proof, for the investigation of these diseases. The station was established on a sound financial basis, and would start with Tomato wilt. If growers had any specific virus diseases among their problems, they were invited to submit them for early investigation.

Professor Rivett again referred to the absolute necessity for fundamental work in all directions. It was life histories and so on that were wanted. Without this work experimenting in the orchard was so much shooting in the dark. Work in these matters had to be planned on a very sound basis at the start, as it extended over many years. It would be quite easy to waste ten years by a false start.

Mr. Tully, in moving a resolution of thanks to Professor Rivett, hoped that in future, when such questions arose, a representative of the Science Council would come along and discuss them.

Mr. Thomas seconded, and said progress reports of what was being done for the orchardists would encourage them. It would be a good thing if more meetings were of such an instructional character, and less of formal work.

The resolution was cordially endorsed, and Professor Rivett, in reply, said the Council hoped soon to have men competent to deal with the problems raised.

It was decided to send a letter congratulating the Federal Government on having provided the sum of £250,000 for scientific work, which was of such vital importance to the fruitgrowing and other industries.

#### WHEN TO PICK APPLES.

Fruitgrowers are asking scientists to tell them when Apples should be picked. The small boy knows—when the grower has gone in for dinner and the dog's chained up.

## FRUITGROWING IN SOUTH AFRICA.

### Manurial Practises.

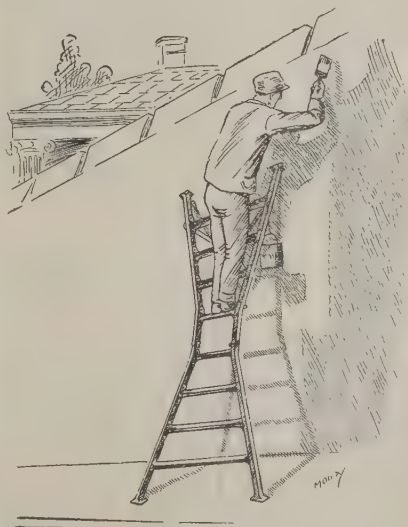
#### The "Fruit World" Appreciated.

Lieut.-Col. E. I. D. Gordon, of Drumearn, Elgin, Cape Province, South Africa, writing early this year to Mr. G. H. Simpson, of "Roke-wood," Karragullen, W.A., gave some interesting particulars regarding fruitgrowing in his district. He stated:—

"I have been subscribing for two years to 'The Fruit World of Australasia,' which I find most interesting and most useful, as I get excellent information out of it, particularly suitable to us, as our conditions are very

plough their orchards in August, to avoid having the fertiliser washed out; but I have come to the conclusion that as, by applying the fertiliser in August, the full benefit cannot be obtained therefrom during the coming season, it would be as well to apply the fertiliser in autumn and risk it being partly washed out.

"This farm is about 285 acres in extent, and about 90 per cent. of it can be ploughed. I have 8,500 trees, of which about 5,000 are Apples, 1,100 Pears, 800 Prunes, 500 Peaches, 500 Japanese Plums, the balance being Almonds, Cherries and Walnuts, etc. For my first really commercial crop (in 1924) I averaged 8/6 per bushel box for the Apples delivered at Elgin station (deducting boxes, wrappers, and cost of packing,



#### USEFUL ORCHARD LADDER.

This illustrates the "Duro-3-in-1" Ladder (described in our last issue), in use as an ordinary wall ladder.

similar in many respects to those in the Apple-growing districts of Australia. I was extremely interested in the account which appeared in the "Fruit World" of last July of your use of muriate of potash for Apple trees. I am writing to ask you to tell me at what time of the year you apply the muriate of potash. Probably it is the autumn.

"Elgin is about 50 miles S.E. of Cape Town, and about 1,000 feet above sea-level. The rainfall is from 30 to 40 inches, mostly in the winter, with seven to nine inches between the beginning of October and the end of March. We get a lot of frost, three or four degrees of frost being quite common throughout the winter.

"In consequence of the heavy rain in winter, most growers here do not apply their fertilisers until they

etc., but not cost of producing the fruit), and for 1925, 10/- per box exactly."

#### ORDER YOUR TREES NOW FOR 1927.

NOW is the time to place orders for fruit trees for 1927, in order to secure prompt deliveries. Messrs. John Brunning and Sons, Somerville Nurseries, Somerville, announce in another column their ability to supply all varieties of Apples, Pears, Peaches, Plums, Apricots, Quinces, Figs, Cherries, Citrus trees, Mulberries, etc. Catalogues may be had on application.

"Grasp an idea and work it out to a successful conclusion. That's about all there is in life for any of us."—E. H. Harrman.



## Victoria.

Crop Report :: Marketing Organisation  
Plum Prices Fixed :: News and Notes

### FRUIT CROP REPORT.

There are about 400,000 cases of fruit in cool store; this is being sold at good prices, states the Department of Agriculture in its September report. Continuing, the report states:—

Passion vines promise well, and should there be no late frosts there will be a heavy crop.

The green Peach aphid is causing Peach growers some concern, and spraying to combat the pest is general. Apricot scab is already showing up, and owing probably to the heavy rains of early spring, this disease will require special attention.

'Phone Central 8479

# F. W. Vear

*Fruit Importer  
and Exporter*

COMMISSION AGENT

49 WILLIAM ST.,  
MELBOURNE, VIC.

Solicits consignments of APPLES,  
ORANGES, BANANAS, PINES and  
all other fruits.

Account sales with cheque daily.

The control of thrips is also giving concern, as they are appearing in large numbers on Apple and Pear blossom. Spraying with a weak oil emulsion combined with nicotine-sulphate is being carried out.

The Cherry aphid is reported to have made its appearance in new centres and will require early attention.

### Viticulture.

The winter has been a wet one, especially in the North-East. August, like the previous months, being well ahead of the average. At Rutherglen 3.63 inches were recorded during August, the average being 1.82. The subsoil has been well wetted and a good bud burst should result. Spring has come in suddenly, with unusually warm days for this time of the year.

Ploughing has been in many cases

delayed by too much wet, and the sudden transition to almost summer conditions will be severely felt by those vineyards where tillage is not well under control.

Most of the vines are bursting nicely. Slight frosts were experienced in many parts of the State, early in September, but little or no damage seems to have resulted.

### Citrus.

The ploughing under of green manure is now almost completed. Citrus trees generally are looking well, and the blossoming promises a good crop for next season. There has been an almost total absence of fungus diseases of the fruit in the grove this season, and Oranges have kept well in transport and storage. Prices for Oranges are being well maintained. The Navel crop is now being harvested generally throughout the State, and some Valencia Late are coming on the market.

### A FRUIT MARKETING ORGANISATION.

A WELL-ATTENDED conference called by the Victorian Fruit Council, was held on September 22, Mr. J. H. Lang presiding. Delegates attended from the principal fruitgrowing centres of the State.

The Chairman suggested that the several growers' organisations now operating should meet to decide on plans to prevent overlapping.

Mr. J. A. Henderson (Tatura) said that the late lamented semi-Government scheme was unsound. It was a sort of post office, and after orders had been received, the manager had to make a frantic rush to obtain the fruit. The need was for standardisation and the regulation of supplies. The Californian Fruit Exchange was the best example of co-operative marketing.

Mr. E. H. Kershaw (Wandin) advocated compulsory organisation.

Mr. H. J. Willoughby (Tyabb) stated that the single case order trade could not be extensively developed. Growers should make use of the existing channels and the services of agents.

Mr. C. H. Jost (Quantong) said that district organisations properly worked should prove successful in

handling the local crops. "Take off your coat and get to work," was his advice.

The discussion was contributed to by Messrs. J. Stewart (Shepparton), Cole (Tyabb), Rushton (Shepparton)—who said soft fruits could not be economically packed in district packing sheds—H. V. C. Wilson (Harcourt), and Brown (Pakenham). Mr. Aspinall (Metropolitan Association) stated that 200,000 bushels of fruit had been sold in the kerb markets in seven years.

Mr. B. S. B. Cook (Victorian Central Citrus Association) said the Government advance of £2,000 had been spent wisely in distribution and propaganda. The grower, however, was a born gambler. He defended the administration of the Fruit Marketing Organisation.

On the motion of Messrs. Lang and Lipscombe it was decided to form a Committee to devise a practical marketing proposal. The following com-

## Clifford Barnsbee

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**MORGAN & WILMINGTON,**  
Turbot Street Fruit Exchange,  
Brisbane.

Reference.—Primary Producers'  
Bank of Australia.

**B. P. B.,**  
**B. P. BROADBENT,**  
City Market, Sydney.

Reference.—E. S. & A. Bank,  
Haymarket.  
Also "Elephant" Brand Spray,  
Blackburn Casemaker Pty. Ltd.,  
and Wrapping Paper.  
Agencies in  
Covent Garden, London, and  
Germany.  
'Phone: Central, 1837.  
Cables—"Finson," Melb.

mittee was elected:—Messrs. H. V. C. Wilson (Harcourt), C. H. Jost (Quantong), J. A. Rushton (Shepparton), W. F. Cooper (Lancaster), J. A. Henderson (Tatura), R. M. Finlay (Diamond Creek), J. W. Aspinall (Metropolitan), J. Stewart (Shepparton), T. E. Butler (Narre Warren), W. H. Carne (Pakenham Upper), J. Mitchell and A. McCully (Wandin), B. S. B. Cook (Citrus), W. E. Pratt (Croydon), J. Davis (Western Market), and a representative of the Tyabb Cool Stores.

The Committee met subsequently, and after full consideration, it was decided that the proposals for the continuation of the Fruit Marketing scheme be referred to district associations for the purpose of discussing details in the light of past experience, and formulating a definite scheme for

the coming season, and that a further meeting be arranged of the different sections, so that the various schemes can be dove-tailed together to prevent overlapping, and securing the closest co-operation among the supplying centres.

### FRUIT MARKETING ORGANISATION.

#### £2,000 Advance Must be Repaid.

In accordance with a resolution carried at the last meeting of the Victorian Fruit Council, a letter was sent to the Minister for Agriculture and Markets, asking that the repayment of the £2,000 advanced to the F.M.O. should not be enforced, as it was prejudicing the proposals for an orchard tax, which the Council considered desirable in the best interests of the industry.

In reply the Minister states that he cannot see his way clear to recommend that the £2,000 be made a free grant, as the advance was made on the understanding that it would be repayable. He adds:—"It is not proposed to enforce the immediate repayment of the advance when the legislation providing for a levy or orchard tax is passed, but to allow repayment to be spread over a number of years."

### VICTORIAN BERRY GROWERS.

#### Activity of Growers' Association.

THE United Berry Growers' Association is reported to be making steady progress. The President, Mr. W. C. E. Jones, J.P., of Silvan, in a recent interview, said the Association had been strengthened by the addition of new members, including the Wandin Diggers' Berry-growers. The annual sale of 7 to 10 thousand buckets of berry fruits—Strawberries, Loganberries, Gooseberries, Red Currants, Lawton-Blackberries, etc., is expected to be increased this coming season. Co-operation, not isolated individual effort is the keynote of success, the men realising that their place on the land is a national asset.

The coming season promises to be a good one, so the U.B.G.A. have three direct distributors out getting orders in the city and suburbs of Melbourne for home jam making. A special feature of this season's operations is the 6 lb. pack of the various fruits for small households.

Besides the big avenue of direct distribution, arrangements have been

made with one of the largest canning and jam-making companies to take the whole of their surplus production.

This is a move in the right direction. It works for the two people, for it not only stabilises the berry industry, but serves to assure the manufacturer of his supplies.

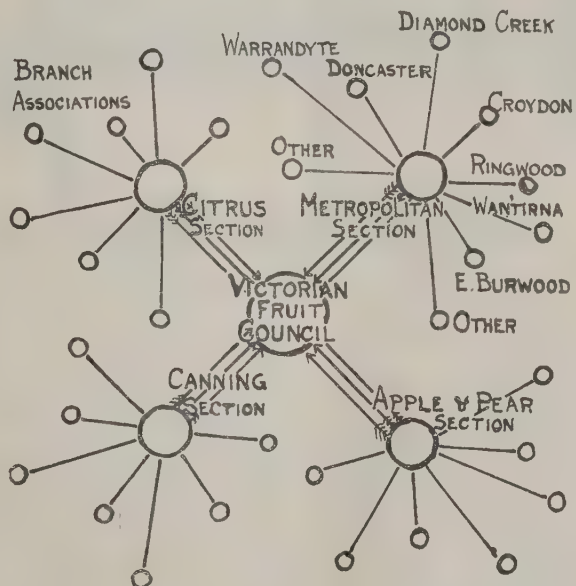
The United Berry Growers' Association points out that up to the present no money has been made available to the berry organisation by the Government, for organising or for finding markets, and that this matter should not be overlooked.

With more complete organisation for distribution and sale, additional areas for production could be opened up.

Growers' Barrows" in the city, for the supply of fresh Strawberries, etc., during the coming season, in new 1 lb. punnets.

The President of the U.B.G.A. wishes it to be known that he will be pleased to give any information re the policy of the organisation, etc. Letters should be addressed direct, Mr. W. C. E. Jones, J.P., Silvan, Vic. Inquiries re prices, or order for fruit for direct distribution, etc., should be sent to the General Secretary, U.B.G.A., Mr. J. M. Mitchell, of East Wandin.

Before the interview closed, Mr. Jones stressed the valued assistance the growers had received from the press, he said that in every way pos-



"Sketch prepared by Mr. J. Stevens, of Vermont, Vic., showing what is proposed in the newly constituted Victorian Fruit Council, which is suggested should supersede the State Fruit Advisory Board.

The private order business will be done with the aid of a "New Pack," a very light, square wooden bucket, fitted with a parchment paper lining which holds all the juice, keeps the fruit clean, and is in every way a distinct advance on old methods. The new wooden pack is sold with the fruit, and is not returnable, it is a very handy light useful basket when emptied. This bucket is made by the Australian Baskets Co., of Melbourne, The U.B.G.A. have secured the sole rights for its use in the carriage of their products.

Negotiations are also proceeding with the representatives of the "Fruit

sible, when the organisation was making a bid to bring the growers together the press has quickly got to know the objective, and had been the means of the success that had attended the efforts of honest endeavor in the direction just indicated.

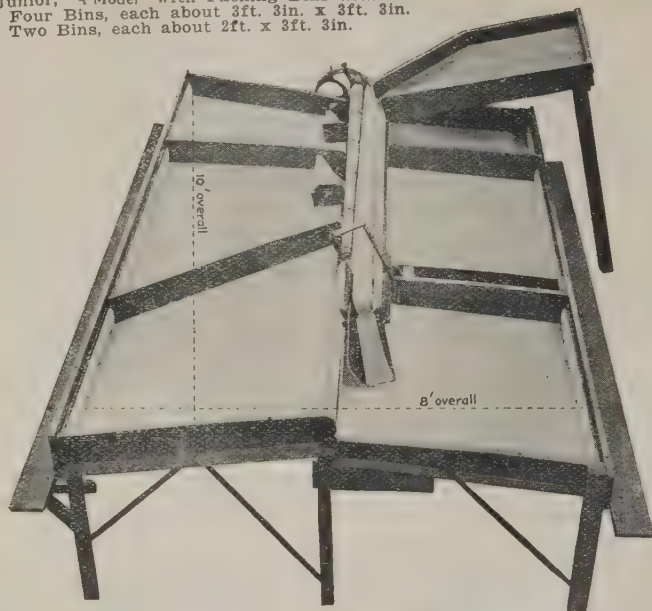
Later.—Since the foregoing was written, thrips have taken heavy toll of the berry fruit crops.

#### FROST DAMAGE AT MILDURA.

A severe frost on the night of October 15 did considerable damage to the Grape crops at Merbein and Mildura. Though the area affected is small, growers therein have suffered almost total loss.



Junior, "A Model" with Packing Bins attached.  
Four Bins, each about 3ft. 3in. x 3ft. 3in.  
Two Bins, each about 2ft. x 3ft. 3in.



"To Choose the Best is Wisdom"

THE . . .

## "Lightning" Junior Fruit Grader

—Built Specially for You

We are Specialists in Fruit Grading Machinery and concentrate solely on this work so you know that what we offer you is just right.

The principal features of this Model are:—Low in Price—Good—Accurate—Very Large Bins—Sound Construction—Simple to Operate—Very Light—Fitted with the "Lightning" Genuine Solid Rubber Roller.

Cash Price of Unit only, £23/10/-,  
F.O.R., Melb. (without Packing Bins).

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### PLUM GROWERS' MEETING.

Price Fixed at £8/10/- per Ton.

A special meeting of Plum growers, convened by the Metropolitan section of the Victorian Fruit Council, was held at Box Hill, on September 30, when the price per ton for this season's Plum crop was decided.

The President (Mr. John Tully, Doncaster), who was in the chair, explained that the Plum growers associated with the metropolitan section of the Council were anxious that some means should be devised whereby this season's crop should be disposed of to the best advantage. In the past they had been at the mercy of buyers in that there was no fixed price for the sale of the fruit. Growers of other fruits had been assisted by the Government in the formation of pools. He and the Secretary of the metropolitan section (Mr. J. W. Aspinall) had been assured of Federal assistance if the crop was exported, but nothing could be done if it was disposed of in the Commonwealth. Plums were not a suitable fruit for export in their natural state, therefore little help could be expected in that respect.

The delegates present estimated that the districts they represented

would this season produce more than 500 tons of Plums, made up as follows:—Diamond Creek, 100 tons; Doncaster, 50 tons; Mount Waverley, 50 tons; Burwood East, 50 tons; Warringa, 25 tons, and Croydon, 250 tons. It was considered that the whole State would produce at least 1,000 tons.

On the motion of Messrs. Lipscombe and W. Cooke (Diamond Creek) it was decided to fix the price of Plums for this season at £8/10/- per ton, and that every Association in the section be written to and asked to put the proposal before the growers.

It was also decided that the method of disposal be left in the hands of the metropolitan Committee, and that the Secretary should visit all the districts in the section and ascertain what quantity of Plums each grower was prepared to place upon the market at the price fixed by the meeting.

### PASSION FRUIT AND BERRIES AT MT. EVELYN.

On the property of Major K. Money, at Mt. Evelyn, Victoria, there is a considerable acreage of Passion Fruit vines, the fruit being sent to market in Melbourne. The Passion vines are all grown on trellises, six feet high, and 250 feet in length. These rows of trellises are 14 feet apart, and Gladioli are grown in long rows between the Passion Fruit vines—which thus form a perfect shelter from the wind for the long spikes of flowers.

A large acreage of Strawberries, Loganberries and Blackberries is also grown. Several tons of Strawberries are sent annually to Melbourne, mostly in 1 lb. punnets, and owing to their exceptional quality, command the top market prices, averaging one shilling per 1 lb. punnet, wholesale, throughout.

(Further Victorian Notes, see p. 527.)

A butcher, walking down the street, passed a dairy and read this sign: "Milk From Contented Cows."

He was impressed with the idea and decided to adapt it to his line of business. The following morning this sign appeared in his window: "Sausages From Hogs That Died Happy."



(GIBBS BRIGHT & CO.,—See Page xiv.)



## VICTORIAN CENTRAL CITRUS ASSOCIATION PTY. LTD.

### Annual Report.

**I**N SUBMITTING their report for the year ended April 30, 1926, the Directors state that the period under review was, excepting export to Great Britain, the most successful since the formation of the Association in 1921. In membership and finances the Association is stronger, and it is stated that never in the history of the Melbourne market have sales been stabilised on such satisfactory prices to growers.

In many other respects the Association has been of substantial service. By special arrangements V.C.C.A. growers have been enabled to obtain big reductions in the price of softwood cases, trees, clippers, picking gloves, and graders.

### Finances.

During the year strict economy, together with the new system of collecting levies and the greater quantity of fruit handled, has enabled a fair profit to be shown. Country organisation work has not been carried out as extensively as heretofore, but it is hoped shortly to devote more time to both this work and the extension of country sales.

### Melbourne Market.

Regulation of supplies has been maintained, accredited agents being kept advised of every move and prospect. They were thus able to secure prices well ahead, on the average, of those secured by outside agents, and many hundreds of pounds were saved to growers by holding back fruit to prevent a collapse when the market was over-supplied. Growers at Leeton (N.S.W.) have agreed to form a packing-house company, which will enable better control of Leeton fruit for the Melbourne market.

Efforts are still being made to have the Western Market removed to a site adjacent to the Victoria Market.

### Provincial Markets.

During the year Messrs. Bryant and Gourlay were appointed accredited agents at Ballarat. Efforts are being made to secure a strong agent for Geelong.

Recently V.C.C.A. market quotations have been broadcast from 3LO, giving widespread satisfaction.

### Export.

Export to Great Britain during the past season was not extensively carried on. This is still in the experimental stage; scientific investigation into the problems of culture and transport is being undertaken by the Council for Scientific and Industrial Research.

Arrangements have been made between New South Wales, South Australia and Victoria for regulating supplies to the New Zealand market, but operation of these has been delayed owing to the withdrawal of the passenger steamer for overhaul.

Efforts to open up trade with China were postponed owing to the unsettled political condition there. A report by the Australian Trade Commissioner indicates that a good market exists in Canada. If a reasonable freight rate can be arranged, a trial shipment may be sent.

### Compulsory Levy.

We are within measurable distance of power being created to collect a levy from all Citrus growers, whether inside or outside the co-operative movement. Uniformity of action among the several States was decided on at the Conference of Ministers of Agriculture in Brisbane, and a Bill will be introduced into the Victorian Parliament next session to provide for the collection of the levy.

### Fruit Marketing Scheme.

This attempt to bring closer touch between producer and consumer is viewed as a valuable effort to increase the consumption of fruit. It is imperative that districts which have agreed to supply shall honor their

undertakings, irrespective of fluctuations on the Melbourne market.

### Directors.

During the year, Mr. J. R. Gorton resigned owing to pressure of private business, and Captain D. Halhed, of Merbein, was appointed in his place.

In accordance with the decision at last annual meeting, Associate Directors have been appointed as follows:—Merbein, S. Thompson; Curlwaa, H. F. Midgley; Nyah, R. A. Black; Tresco, D. A. Merton; Cobram, F. H. Quick; Echuca, A. L. Weymouth; Tongala, A. J. Wood; Wangaratta, J. P. Larkings. Nominations from others districts are awaited.

Eight Directors' meetings have been held, and various conferences attended. It was decided to hold annual interstate Citrus conventions at different centres in the several States.

### FILM SHOWS USES MADE OF WASTE ORANGES AND LEMONS.

How scientific research helped to establish the manufacture of Citrus by-products, "the balance wheel of the industry," providing uses for waste fruit that formerly was worse than a total loss, is shown in a new United States Department of Agriculture motion picture, "Profits From Cull Oranges and Lemons."

A remarkable collection of culls, victims of the grading processes which the marketing problem has brought about, and which are not wormy or decayed, but are blemished, irregular or odd-sized, are shown in the film to illustrate the types of Oranges and Lemons which represented 30 per cent. of the annual production. The research work of the bureau of chemistry in a laboratory at Los Angeles is shown as a sample of the efforts that have brought about the establishment of several large plants manufacturing Lemon oil, Orange oil, citric acid, marmalade and jelly, Orange juice and pectin.—"Citrograph."



## A PROCESS FOR COLORING CITRUS FRUIT.

To make it more saleable a considerable proportion of certain varieties of Florida Oranges and Grape Fruit is colored by a gas formed by the incomplete combustion of kerosene or similar petroleum product. This practice, which is regarded as a legitimate one, was begun in California a number of years ago (states the "New York Journal of Commerce"), and nearly all packing houses there are now equipped for coloring.

In response to requests, the United States Department of Agriculture undertook experiments with a view to adapting the process of coloring Citrus fruits to conditions in Florida. The best results were obtained by having the stove outside the coloring room, the gas being piped in, thus preventing damage by excessive heat.

In the course of the experiments it was found that Grape Fruit and Oranges can readily be colored by the exhaust from a gasoline engine, by ethylene, as well as by the gas formed by the incomplete combustion of kerosene or other similar petroleum product. Grape Fruit colors more readily than Oranges, and early Oranges assume the characteristic golden yellow color more quickly than does the spring maturing Valencia. Oranges begin to show the desired color within 48 to 72 hours after treatment is begun.

## LEMONS FOR HEALTH.

Plan your spring menus to include the Lemon. Such is the advice recently given by Prudence Penny in an article on "Lemons and Laziness," appearing in the "New York American," states the "Californian Citigraph." For that "tired feeling," which is the principal symptom of spring fever, there is no better tonic states this authority.

"Every year just about this time the whole country seems to suffer from an acute epidemic of laziness. In the popular parlance the disease is known as spring fever, and it is usually made the subject of much humorous comment," to quote Mrs. Penny.

"There is very real reason for this lazy feeling, however," she continues. "It is due to the heavy heat and energy foods which people eat during the winter—starches, sugars and fats—and the fact that they abandon golf and kindred outdoor sports for the indoor amusements of the theatre, movies and radio. This combination

by spring time has put the individual in a state where he feels all "worn out."

He needs something to make his blood run faster and to stimulate his pep. Physicians, who have studied the question, advocate a changed diet leading to a decrease in starches and proteins and an increase in raw, green vegetables and fruit. They recommend the Lemon in particular because it is especially rich in the mineral salts and vitamins which the system needs at this time, and also because it possesses a taste that makes other food more palatable and aids in the digestive process.

Lemon sauce, Lemon juice in salad dressing, Lemon dessert, lemonade (both hot and cold), and Lemon in tea, according to Mrs. Penny, are dishes that should be included in the spring dietary.

## "AS OTHERS SEE US."

Here are some remarks by "Citrus Sam" in "Citrus Leaves":—

"One clumsy man can break an egg, but ten thousand of our best can't put it back together again. So it is with co-ops.—one ignorant windjammer can often do great damage to his neighbours, which money and time can't repair. There should be a special island set aside to hold all the people who indulge in loose and uncertain talk."

\* \* \*

"Agriculture cannot afford to let politicians do its thinking. To do so would be to put itself in the position of the business man who allows his competitor to do his buying. The ancient and honorable profession of feeding the world has brainy men of its own—give them the right and the opportunity to fight for and work with you."

## "EAT MORE VITAMINES."

### A Doctor's Advice.

The sight of luscious fruits, rich in the colors of perfect ripeness, with the soft downy signs of maturity covering them with a mantle of delicate bloom, is one that has an appeal that is deeper than mere love of the beautiful in nature. The age-old saying—"They make the mouth to water"—is evidence that the appreciation of fruit is one that is not only aesthetic but gastronomic.

Specially is this so when fresh fruits are out of season.

Man's instinctive desire for the delicious aroma of ripe fruits and the appetising stimulation of their beautiful fragrant juices can be fully gratified by sun-dried fruits of all kinds at all seasons of the year.

The supreme virtue of the dried fruits lies in this little-known, and therefore insufficiently appreciated fact.

They are allowed to reach the stage of perfect ripeness on the tree. Before the actual picking takes place the juices are tested for the sugar content with a Beaume Tester or Sachrometer. The Sachrometer is floated in a glass tube filled with strained fruit juice, and the signal for picking is given when the little "meter" shows that the sugar content is highest and the fruit is perfectly ripe.

The higher the sugar content, the thicker the syrup or juice will be, and the higher will the little "meter" float in the tube. Thus all guesswork in picking is eliminated.

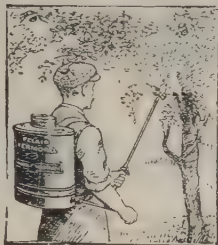
Nothing is done haphazardly in these beautiful orchards, the "Health Mines of the Murray Valley," for it is of the utmost importance that the fruit has ripened in Nature's way in the glorious sunshine while yet it hangs from tree and vine. By obeying Nature and following her laws in this way, the grower gains his reward in a heavier, more valuable yield. The consumer gains immeasurably in food value, as fruit that has ripened perfectly before drying is infinitely more nourishing and health-sustaining than if allowed to ripen anywhere else save on the tree or vine in the life-giving sunshine.

Scientists have discovered only recently that the life-giving substances that they have named "Vitamines" are present in truly ripened fruits, and that Raisins are rich in vitamins. According to Dr. Geo. E. Payne Philpots, D.D.S., a leading Australian authority on vitamins, Raisins, if eaten raw as a confection, are exceedingly healthful by virtue of those mysterious properties now known to be so essential to health and life itself.

## Getting a Start.

Modern damsel (romantically): "Oh, mother, I want to rise to higher things. I want to act for the films and reach the topmost rung of the ladder."

Mother: "That's the right spirit, Pola. Now climb right up on the stepladder and put up the clean curtains."



The "Eclair" Spraying Fruit Trees.

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BUCKET PUMPS

BUCKET SPRAYERS  
SINGLE WHEELED SPRAYERS  
TWO WHEELED SPRAYERS  
CART SPRAYERS  
AUTOMATIC HORSE DRAWN SPRAYERS

POWDER BELLOWS  
KNAPSACK POWDER  
SPRAYERS  
AUTOMATIC HORSE DRAWN  
POWDER SPRAYERS

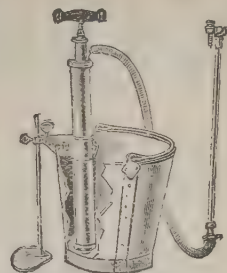
LIQUID CAPACITIES 1½ pints to 88 gallons.

PRICES FROM 4/- each.

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## Victorian Notes

### ROYAL SHOW APPLE-PACKING COMPETITION.

Won by Harcourt State School.

**T**HE PERPETUAL SHIELD presented by the Fruit Exporters' Handling Committee for the Apple-packing competition at the Melbourne Royal Show, was this year won by the pupils of the Harcourt State School, and was presented to the Head-master (Mr. Dalrymple) on October 4.

In making the presentation, Mr. J. M. Ward (Superintendent of Horticulture) said that this year there were just on 200 cases in the competition, compared with about 160 last year. He congratulated Harcourt on its well deserved win.

Mr. Dalrymple suitably responded, and a gold medal was presented by Mr. Lawson, M.L.A., on behalf of the Harcourt Fruitgrowers' Association to Hedley James for the best-packed individual cases. Appreciative reference was made to the establishment of the children's packing classes, which it was felt were doing much good in training these prospective horticulturists.

### THRIPS AT HARCOURT.

#### Apple and Pear Crop Reduced.

From present indications (20/10/26) the coming season promises to be the

worst experienced in this district for many years.

The warm weather during the latter part of September followed by a cold spell was disastrous to the early blooming Pears, particularly Winter Nelis, which are a total failure. Josephine and Bosc are light, while W.B.C. is fair to medium.

The thrip played great havoc with the Apples and there are practically no Dunn's, Jonathans, or Stone Pippins. Cleopatras are showing up better, and the crop there is light to fair.

The blossom on the later varieties, Rome and London, is looking very sick.

This is primarily an Apple and Pear growing district, though a limited quantity of stone fruits are grown.

Plums are fair to medium, and Cherries much the same.

The codlin moth and light brown Apple moth are now on the wing, a small number being caught in the traps.

### WANTIRNA.

The Wantirna Fruitgrowers' Co-operative Association Ltd., held their second annual meeting on September 7, 1926, at the Wantirna Cool Stores. Mr. Gosbell presiding. Mr. O. Newman was again elected Secretary, and Mr. A. Hansen, Treasurer. The following were nominated and elected to act as Committee for ensuing year:—Messrs. H. Thatcher, A. Hansen, H. Gosbell, E. V. Frankhauser, H. W. Walker, Mr. G. Mason and Mr. A. Sanders, were again elected to act as Auditors for the Association.

The balance sheet shows cash in hand and in bank, £105/15/5, the profit on the year's work being £12/17/5.

### A NEGLECTED MARKET.

Holland a Large Importer of Fruit.

Last year Holland imported more than 1,000,000 cases of Spanish Oranges, and 350,000 boxes of American Apples, besides 50,000 boxes of Grapes, Pears and Apples from South Africa.

This small country has a dense population, besides large interior markets in western Germany. There are 16 towns with a population of over 50,000 inhabitants, and fruit consumption in the interior is yearly increasing. The General Fruit-Import Company (Algemeene Vruchten Import Maatschappij) has an extensive organisation extending throughout Holland and the Continent, and completely equipped at both the well-known ports of Amsterdam and Rotterdam, which, they state, offer equal facilities for shippers.

Last year trials were made with importing Australian Oranges, but unfortunately the cargoes arrived in poor condition in the English ports. This is said to be an interesting article for the Dutch market, and shipments of sound stuff are recommended.

The firm is desirous of obtaining direct shipments of Australasian Apples, instead of having to draw for supplies on the English and Hamburg markets. The Australasian representative is Mr. H. G. Colombie, Temple Court, Melbourne.



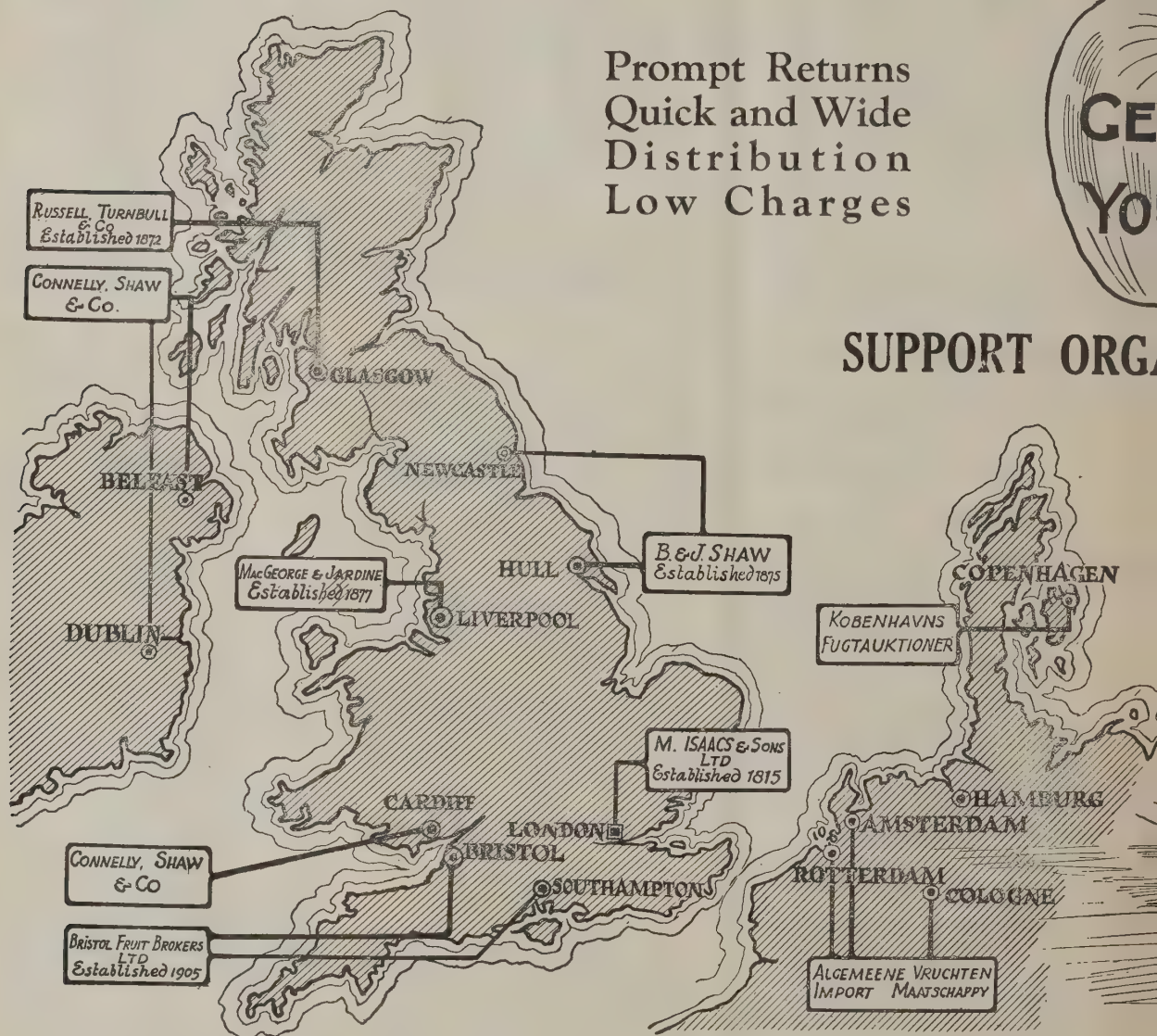
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# MARGIN OF PROFIT

## THIS ORGANIZATION

### AUSTRALIAN GROWERS

Profit by the experience of other growers

CENTRALISE the sale of your fruit IN THE ONE RECOGNISED AUCTION SALE-ROOM AT EACH PORT, where Overseas Fruit is concentrated for sale, and where large numbers of buyers attend regularly.

THIS CONCENTRATION ENABLES BROKERS TO REGULATE SUPPLIES AND STABILISE MARKETS.

By this system BUYERS ARE MADE TO COMPETE for the fruit, TO THE BENEFIT

OF YOUR RESULTS, whilst by other methods, salesmen compete to obtain buyers.

CATALOGUES ARE PRINTED for buyers before sale, and reprinted after sale SHOWING ACTUAL PRICES PAID for your fruit. No manipulation of results possible.

Lots are sub-divided to enable all buyers to compete on equal footing.

Each parcel is valued by Auctioneer before sale, and lots not realising reserve prices are withdrawn.



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## South Australia

Record Vintage : Mid-Murray Show : Notes

### TENTH MID-MURRAY SHOW.

#### A Striking Success.

THE tenth annual Show of the Mid-Murray Horticultural and Agricultural Society, held at Waikerie (S.A.), at the end of September, was remarkable, both for the excellence of the 1,500 exhibits, and for a good rain which heartened the large crowd present.

#### Citrus Fruits.

The prize collection was one of the best seen on the Murray. The best collection of Citrus fruits grown by any one exhibitor (won by Holder Ltd.), was excellent. Thompson's Improved, other Navels, blood Oranges

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**WADE**  
& CO.

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Prompt Advices of Sales  
—CHEQUES WEEKLY—

**471 FLINDERS LANE  
MELBOURNE**

And WESTERN MARKET.

and Mandarins, were very fine. The Washington Navels packed for export won favorable comment.

#### Dried Fruits.

Mr. C. G. Savage, Manager of the Berri Experimental Orchard, who judged the dried fruit, said the exhibit was a very fine one. The only entry in the collection of dried fruits class was a really good one. Competition should be keener, states the "Murray Pioneer." The Peaches staged were excellent, and this was one of the strongest classes shown. The exhibit of cold dip fruit from Cadell was excellent and hard to beat anywhere. The Apricots were very good, but some showed faulty grading.

The William Francis cup (presented by the President of the Show)

went to Mr. H. F. W. Lehmann, who gained a total of 57 points in the dried fruits section, scoring six firsts and nine seconds, against Mr. Wilson Francis with 21 points (three firsts and two seconds).

Other sections were most favorably commented on by the judges, particularly the livestock and farm produce.

### S.A. NECTARINES IN LONDON.

Messrs. Geo. Selth and McRae Ltd., of Adelaide, have forwarded the following extract from a letter received from their London agents:—

"Nectarines ex 'Naldera'."—"We are pleased to be able to advise you of the sale at 100/- per cwt. of the above 40 boxes of Nectarines and feel sure that you will be more than satisfied with such a high price. It was fortunate that there were practically none on the spot and this is probably the reason why we obtained such a figure. At the same time we would like to congratulate you on the excellent 'put up' and quality of this little lot. It is as good a parcel as our brokers have seen for some considerable time."

We are advised, states the "Murray Pioneer," that the fruit in question was dried by Mr. H. von Bertouch, of Berri, and Mr. H. Brand, of Glossop, and was packed by the Berri Co-operative Shed and by Mr. Hunt at Monash.

### RECORD SOUTH AUSTRALIAN VINTAGE.

11,800,000 Gallons Wine Made—an Unexpected Result.

The Government Statist (Mr. W. L. Johnston) reports that the recent vintage has been an exceptionally heavy one, says the "Australian Brewing and Wine Journal." Owing to the returns of several wine-makers being still outstanding, he is unable to complete his statement of the season's activities, but it is certain, from the returns already received, and making a conservative allowance for those not in, that the total wine made for the season will probably even exceed 11,800,000 gallons. The previous highest vintage was 10,756,538 gallons in 1924.

That the recent vintage should have

resulted in a record is surprising, seeing that the vines had to stand up to nearly a six months' drought, and, in consequence, the best experts anticipated a falling-off of fully 30 per cent. on the record vintage of last year.

The following figures indicate the State's wine production for the last seven seasons, together with the drought year of 1914-15, which is given for comparative purposes:—

| Season.           | Gals. Made. |
|-------------------|-------------|
| 1914-15 . . . . . | 1,507,196   |
| 1919-20 . . . . . | 5,085,939   |
| 1920-1 . . . . .  | 7,893,345   |
| 1921-2 . . . . .  | 6,370,310   |
| 1922-3 . . . . .  | 8,653,579   |
| 1923-4 . . . . .  | 10,756,538  |
| 1924-5 . . . . .  | 10,502,381  |
| 1925-6 . . . . .  | 11,800,000  |

Mr. C. G. Savage, R.D.A.

Orchardists view with pleasure the retention of the services of M. C. G. Savage in South Australia. Mr. Sav-

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age has now been appointed Deputy Horticultural Instructor in addition to his position as Manager of the Berri Experiment Orchard, and has also accepted a further appointment as Technical Consulting Officer to the Irrigation Commission.

Mr. Savage is at present engaged on a special enquiry for the South Australian Government, obtaining a soil and crop survey of the repatriated soldiers' fruit properties on the River Murray areas.

### DRIED FRUITS FOR CANADA.

"It is expected that £60,000 worth of Australian dried fruits will be placed in Canada this year," stated the Victorian State Treasurer in presenting the Budget to Parliament,



### Sow Seeds Thinly.

A VERY COMMON MISTAKE amongst amateur gardeners, especially those doing garden work for the first time, is the sowing of seeds too thickly. Vegetables which come too thick get overcrowded and should be thinned out, but often the beginner does not make a satisfactory job of this. Cases in which thick sowing is justified are—(1) if the seeds are known to be of a low percentage of germination (germination tests can easily be made by placing 50 or 100 seeds between layers of moist blotting paper); (2) if the soil is so stiff that delicate seedlings have difficulty in getting through; (3) if it is desired to utilise the extra plants, either by transplanting, or for greens; and (4) if there is danger that many of the plants will be destroyed by insects or other pests.

Vegetable crops should not be sown too thickly and require to be thinned out early, partly because delay means overcrowding and weakly plants, and also because there is less disturbance of the roots of the plants that remain if the work is done while the plants are yet small.

In order that seeds may germinate it is necessary that moist earth come closely in contact with them. After they are covered therefore, the soil, if at all dry should be pressed down upon them.

### Make Successional Sowings.

To enjoy fresh vegetables during the summer and autumn months, repeated small sowings at regular intervals of two or three weeks should be made, especially of the following:—Beans, Sweet Corn, all Salads, such as Beet, Lettuce, Mustard, Cress and Spring Onions, also Tomato plants.

There is no difficulty in maintaining a continuous supply of Beans throughout the summer and autumn, or until the last crop is destroyed by frost, but it entails successional sowing. A crop of Beans will continue bearing for several weeks if the pods are picked before they become fully grown, and care is taken not to break the branches when picking. However, it is advisable to make repeated sowings so that there will be no let-up at any time with such a valuable and nutritious vegetable.

Tomato plants may be planted at intervals until Christmas. If possible plant in a different position from last year. As Tomatoes are heavy feeders they require plenty manure of nitrogenous matter, stable manure, if possible.

Silver Beet, especially Lucullus or Spinach Beet variety should certainly be sown, for even if all other crops fail, a few rows of this fine vegetable will keep the table supplied with nutritious greens throughout the summer. As the outer and larger leaves of the plants are picked, others quickly take their place.

Cape Gooseberry plants may be set out in rich, deeply dug soil. They like a well-drained, sunny position. Set the plants three feet apart each way, and when 4 to 6 inches high, pinch out the centres to ensure bushy growth. Young Passion-fruit plants should also have the centres pinched out, training to three or four leaders to make a good spread on wall or trellis.

## Vegetable Sowing and Planting Calendar for November.

The following information applies to climates, such as Melbourne and district. For warmer districts, sowing and planting could be done earlier, and for colder districts, later:—

| Seed.                       | Depth.            | Distance Apart. |          | Ready for Use.           |
|-----------------------------|-------------------|-----------------|----------|--------------------------|
|                             |                   | Rows.           | In Rows. |                          |
| Beet . . . . .              | 1 in.             | 18 in.          | 6 in.    | 65 to 100 days           |
| French Beans . . . . .      | 2 ins.            | 2 ft.           | 9 ins.   | 45-65 days               |
| Cabbage . . . . .           | $\frac{1}{2}$ in. | 3 ft.           | 18 in.   | 4 to 6 months            |
| Carrot . . . . .            | $\frac{1}{2}$ in. | 1 ft.           | 2 ins.   | 5 months                 |
| Celery . . . . .            | $\frac{1}{2}$ in. | 3 ft.           | 6 ins.   | 6 to 8 months            |
| Cress and Mustard . . . . . | $\frac{1}{2}$ in. |                 |          | 3 weeks                  |
| Corn, Sweet . . . . .       | 2 ins.            | 3 ft.           | 3 ft.    | 80 to 100 days           |
| Cucumber . . . . .          | 1 in.             | 4 ft.           |          | 3 to 4 months            |
| Egg Plant . . . . .         | $\frac{1}{2}$ in. | 2 ft.           | 18 ins.  | 4 to 5 months            |
| Kohl Rabi . . . . .         | $\frac{1}{2}$ in. | 3 ft.           | 9 ins.   | 6 months                 |
| Leek . . . . .              | $\frac{1}{2}$ in. | 14 ins.         | 4 ins.   | 6 months                 |
| Lettuce . . . . .           | $\frac{1}{2}$ in. | 18 in.          | 8 in.    | 65 days                  |
| Melon . . . . .             | 1 in.             | 4-5 ft.         |          | 4 months                 |
| Okra . . . . .              | 1 in.             | 4 ft.           | 2 ft.    | 4 months                 |
| Onion (Spring) . . . . .    | $\frac{1}{2}$ in. | 1 ft.           |          | 6 weeks                  |
| Parsley . . . . .           | $\frac{1}{2}$ in. | 1 ft.           | 4 ins.   | 4 months                 |
| Parsnip . . . . .           | $\frac{1}{2}$ in. | 18 in.          | 9 in.    | 5 months                 |
| Peas . . . . .              | 2 in.             | 3 ft.           | 6 in.    | 3 to 5 months            |
| Pumpkin . . . . .           | 2 in.             | 3 ft.           |          | 4 to 5 months            |
| Radish . . . . .            | $\frac{1}{2}$ in. | 9 in.           | 2 in.    | 30 to 45 days            |
| Spinach . . . . .           | $\frac{1}{2}$ in. | 1 ft.           | 9 in.    | 4 to 8 weeks             |
| Tomato . . . . .            | $\frac{1}{2}$ in. | 4 ft.           | 3 ft.    | 5 months                 |
| Turnip . . . . .            | $\frac{1}{2}$ in. | 18 ins.         | 9 ins.   | 2-2 $\frac{1}{2}$ months |
| Veg. Marrow . . . . .       | 2 in.             | 3 ft.           |          | 4 months                 |

Plant Seedlings of Lettuce, Cabbage, Cauliflower, and Beet, Plant sets of Potatoes, also roots of Herbs,



# Spraying to Control Insect Pests

## FIGHTING INSECT PESTS.

### Thrips.

This is one of the worst seasons for Thrips which we have had for many years. A spray which has given good results is made as follows:—

- 1 gallon red oil.
- 1 pint nicotine sulphate.
- 80 gallons water.

For further particulars re Thrips, see "Fruit World," October 1st, 1926, p. 475.

### Apelinus Mali

(Parasite of Woolly Aphids).

Twigs of Apple trees containing parasitised Woolly Aphids should be placed in orchards where Woolly Aphids are causing damage to Apple trees.

**Bryobia Mite, Codlin Moth, Woolly Aphids, Pear-leaf Blister Mite.**

All the above-mentioned pests are now plentiful, and spraying should be carried out at once.

See "Fruit World," October 1st, 1926, p. 475.

### Pear and Cherry Slug.

These destructive insects are usually prevalent during October, November and December. For remedies, see "Fruit World," October 1st, 1926, p. 475.

### Orange and Lemon Aphids.

It is many years since the Black Aphids on these trees have been so numerous. They usually cluster round the young shoots, and suck out the sap which causes them to turn black and die. If the trees are thoroughly sprayed with any of the well-known tobacco sprays, nicotine sulphate, black-leaf 40, etc., it will soon rid the trees of these destructive insects.

### Cherry Aphids.

These Aphids are probably one of the worst pests of the Cherry. During the warm weather they appear in great numbers on the trees, and at times have been so numerous as to destroy every leaf and cause trees to die. Sprays same as recommended for Orange and Lemon Aphids.

### Scale Insects.

During the hot weather the young of the Red, Black or Olive, Brown, Apple Mussel and other scales are hatching. A spraying with nicotine sulphate or black-leaf 40 should be used to destroy the young insects be-

fore they make their covering over themselves..

### Caterpillars.

See "Fruit World," October 1st, 1926, page 475.

As Cutworm Moths are very numerous, a sharp look-out should be kept for their caterpillars, which at times do a fair amount of damage to young fruit, Apples especially. Spray with arsenate of lead.

### Apple Root Borer.

These insects are now commencing to lay their eggs on the leaves of Apple trees. Spray at once with arsenate of lead. Shake trees over an old blanket or sheet; this will cause the Borers to drop. They should then be gathered up and destroyed.

## A FRUIT FLY PARASITE.

**A**T THE CONFERENCE of the Australasian Association for the Advancement of Science, held in Perth during August, Mr. W. B. Gurney, B.Sc., F.E.S., Government Entomologist of N.S.W., read a paper entitled "The Control of Fruit Fly and Other Major Insect Pests," in which he referred not only to Fruit Fly, but also to sheep blowfly control and investigations, control of grasshopper swarms and other pests which caused serious losses to crops and stock.

Referring to Fruit Flies, he detailed investigations into the development of these pests, stated that they had resulted in discovering the stages during which control measures for these pests might be adopted. By reason of the eggs larvae and pupae being hidden within tissue of the fruits or within the soil, there was no scope for contact sprays, such as was possible for insects which fed on leaves or the branches. Therefore the only measure left for the larvae stage was boiling or burning infested fruit to prevent recrudescence of the pest. However, parasites of the larvae (maggots) had been discovered, and one which he recorded for the first time at Gosford, New South Wales, was later introduced into Hawaii along with other parasites from Africa. These parasites, however, have so far only achieved partial control. There is room for further investigation and more judicious selection of parasites for the Fruit Fly maggots as well as possible parasites of the Fruit Fly eggs.

Perhaps the most vulnerable stage for control of Fruit Fly was the adult

stage. Traps baited with "lures," such as fruit juice or pollard and water were among the most successful, and Western Australia, at the instance of Mr. Newman, had done pioneer work in this direction. Results of his investigations in New South Wales, however, led him to recommend the use of

### a foliage poison spray

stronger than used elsewhere, namely, 5 oz. arsenate of lead, 4 lb. molasses, 4 gallons water. This foliage poison spray had given 89 per cent. to 97 per cent. reduction of fly infestation in Peach orchards after careful experiments. Four ounces of this liquid poison spray were applied to one or two patches of foliage on each Peach tree once a week for four weeks prior to harvesting the fruit. So far this had proved superior to trapping methods.

## COMBINED OIL-BORDEAUX SPRAY.

In our August issue, Mr. F. Stockton, of Hastings, Vic., referred to the use of oil with Bordeaux mixture, stating that he would not take out a pump of Bordeaux without a gallon of oil to the 6-4-50 mixture.

Referring to this matter, Mr. J. M. Ward, Victorian Superintendent of Horticulture, states:—

This Department has been experimenting for several years with oil combined with Bordeaux mixture. Two years ago, the combined spray was used on Peach, Apricot and Apple trees at the Burnley School of Primary Agriculture and Horticulture with encouraging results. The oils used were crude residual, kerosene and cheap lubricating oil, and these were combined with the Bordeaux mixture in varying quantities to test the efficiency of the mixture as a combined insecticide, ovicide and fungicide.

Experiments are now being conducted at Shepparton with the Oil-Bordeaux spray for Apricot Scab, Leaf Curl and Aphis.

Several growers have used miscible oil with Bordeaux and arsenate of lead spray, chiefly as spreaders, but have complained, in the case of Bordeaux, that it did not emulsify satisfactorily.

The following particulars of the preparation of the cold oil emulsion and combined spray, with directions for preparing same, will be of interest to readers:—

### Cold Oil Emulsion.

An emulsion of petroleum oils can be made with sulphate of copper and lime without heating or the use of soap.

Crude residual oil, kerosene or cheap lubricating oil make good emulsions. For Woolly Aphis, the crude oil is a cheap and effective spray. For the destruction of scale insects or the eggs of Aphides the kerosene or lubricating oil should be used.

When a combined insecticide, fungicide and ovidice is required, the stock emulsion of the last-mentioned oils should be added to standard Bordeaux Mixture, with which it readily mixes. The formula given below is for a dormant spray, and it is not advisable to use it later than the pink bud stage on Apricots and Peaches.

#### Formula.

4 galls. Unprepared Red Oil (Lubricating Oil).

3 galls. of 3 per cent. Bluestone Solution.

1 gall. of 10 per cent. Milk of Lime.

Water or Bordeaux to make 80 gallons.

#### Directions for Preparing Emulsion.

Place oil in vessel holding, say, 10 galls. Add bluestone solution, then milk of lime. Stir and pour into power spraying vat. Start engine, and force mixture through nozzles back into original container at a pressure not less than 150. Sufficient pressure to make a good emulsion can be obtained with a hand power pump.

Note.—1 lb. of bluestone dissolved in approximately 3 galls. of water makes a 3 per cent. solution.

1 lb. of fresh lime in 1 gall. of water gives a 10 per cent. milk of lime.

Should crude oil or kerosene be substituted for lubricating oil, 5 galls. instead of 4 galls., to 80, is recommended.

A good emulsion can be made with a considerable variation of the quantities as given above.

#### TESTS IN NEW SOUTH WALES.

On the same subject, Mr. G. D. Ross, Under-Secretary for Agriculture, advises as follows:—

With reference to an oil-Bordeaux spray, I desire to inform you that no information is available with regard to a miscible spray oil, combined with Bordeaux mixture for Apples, having been tested. Some years ago a cover spray of oil was tried after the pinking stage Bordeaux application for Apple black spot had dried. It was claimed for one thing that the oil cover would minimise the russetting effect of the Bordeaux. This was not found to be the case, as the russetting, if anything, was worse where the cover spray oil was used.

As there was no outbreak of spot, no result was obtained as to the

effect on control of spot. The above refers to a cover spray of oil, not a combined spray oil and Bordeaux. Tests have been carried out with Bordeaux combined with oil on Citrus, the object in part being to ascertain whether the combination had less hardening effect on the tree. This test is now in progress at Narara. It is only in the nature of a preliminary experiment, for the trees are not uniform in type and only two each were available for each section of the spray programme.

Bordeaux 6-4-50 is applied alone, and in conjunction with .5 per cent.,

oil can be mixed with Bordeaux, if spray oil emulsion is poured into a cask from which Bordeaux mixture has just previously been emptied and not rinsed, it will very likely curdle. Though the strength of the oil quoted is less than is used for red spider, it is quite likely to have a good effect in this respect, as stated.

In our "Farmers' Bulletin," No. 72, "Spraying," page 9, it is stated that Bordeaux mixture must not be mixed with "certain oil emulsions."

In these cases referred to, it was found that the emulsification of the oil was affected, and that free oil was formed, which collected into drops.

Oil emulsions have, however, been prepared and combined with Bordeaux for use in orchard spraying.

It is claimed that a mixture of ordinary Bordeaux, with 1 per cent. paraffin oil in the form of emulsion has been found to be satisfactory in Florida. It is claimed that the mixture settles less rapidly and spreads more evenly than plain Bordeaux—and that there is no more tendency to produce spray injury than when the two fluids are applied separately. It should be noted that these experiments were carried out in the Citrus fruit districts of Florida, where a combined insecticide and fungicide is of special importance, since the use of a plain fungicide tends to the increase of certain insect pests which are normally held in check by entomogenous fungi.

#### "BORDEAUX-OIL" MIXTURE.

##### Tasmanian Experience.

IN reply to a question, Mr. P. H. Thomas, Tasmanian Government Fruit Expert advises as follows:—"Bordeaux-Oil" mixture is frequently used by orchardists in Tasmania, approximately half to one gallon of oil emulsion being added to the Bordeaux mixture and applied at either the "green tip" or "pink" stage for black spot control.

The oil certainly increases the adhesiveness of the spray, but in practical experience, it is found that the strength is insufficient to be effective upon scales, red spider, woolly aphis and other insect pests which are controlled with a contact insecticide.

The tests, which were recently carried out in this State in respect to the efficacy of the different fungicides used in controlling the black spot, did not reveal any better results in the control of the disease by the use of this mixture, than that obtained with ordinary well-prepared Bordeaux spray.

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1 per cent. and 2 per cent. oil. Gar-goyle red oil is used, and is emulsified before addition to the Bordeaux.

No injurious effects have been noted during the past two years, but on the other hand the Bordeaux, when used alone has not yet had any material hardening effect on the trees.

Bordeaux oil is used extensively in Florida, and from reports of a few local trials is likely to be used more extensively in New South Wales.

Your remark about the dirty strainer upsetting the oil emulsion sounds likely, for though emulsified



## Tasmania

News and Notes :: Seasonable Work :: Export Control

**A**FTER EXPERIENCING one of the driest winters on record, conditions have completely reversed, and heavy rains continued throughout the blossoming period.

In northern districts serious floods resulted, and washaways are reported, some orchards upon the low-lying areas suffering severely.

The general experience of such climatic conditions in past seasons show that the persistent rains have an effect on the setting of the fruit crops. If continued there is no doubt that fungus diseases (particularly fuscladium) will again affect them. Fortunately the majority of orchardists are now applying the early preventive treatments, and if the weather conditions allow the later sprays to be carried out, a satisfactory control should be exercised.

### Apricot Crops.

It is now possible to review the prospects of the Apricot crops. The serious frost which was experienced in mid-September, has taken a severe toll of the industry.

Practically all the low-lying areas in the Bagdad Valley and Glenorchy districts were affected, the trees being denuded of their crops.

In the Sandford and Kingston districts, growers are more fortunate, the undulating and less exposed areas escaping serious injury.

### Apples and Pears.

Whilst it is yet early to forecast the prospects, so far as the blossoming indicates, the crops will be lighter than last season.

The 1926 crop (3½ million bushels) constitutes a record, being considerably above the normal output. It is evident that many varieties, such as Cleopatra, French Crab, and Jonathan, are showing that the heavy crops, together with the dry season, have influenced the fruit bud formation during the previous year, and that this season will be more of the recuperative order. The outlook for the Pear crops, on the whole, is promising, and if the weather improves, an increase may be expected. These escaped the very wet conditions of October, the weather at the blossoming period being conducive to effective fertilisation.

The berry fruits are also showing good prospects, the rains benefiting the canes and promoting the early growth that is so essential for satisfactory cropping.

Taking all things into consideration, the outlook for the industry is that, with the exception of Pears and berry fruits, the crops will be slightly below normal. Everything will depend upon the weather conditions. If these improve towards the end of October and fine dry weather is experienced, such will be the determining factor as to the quality and quantity of the crops.

### Export Control of Overseas Shipments.

After affirming the principle of a control being exercised over Apple and Pear consignments forwarded to "overseas markets" at the annual Fruitgrowers' Conferences, Tasmanian growers will be generally disappointed that the representatives of the various exporting States which subsequently met in Melbourne, whilst also supporting this principle, would not concede the representation upon the proposed Control Board, that Tasmania is justly entitled to.

The overseas Apple export trade is essentially a Tasmanian industry; it was pioneered and largely developed by Tasmanians, and moreover nearly two-thirds of the total export quantities are annually drawn from the Tasmanian orchards.

Another important factor which should receive consideration, is the relative position of the Apple industry in the different States. Whilst the mainland has its home markets, which are looked upon as a particular preserve, the position of Tasmania, with its large production and small population, make it imperative that over 90 per cent. of the crops be exported out of the State.

Until some organisation is effected that will tend to stabilise the overseas markets and make the position of the exporter more secure, the grower of fruit for interstate and home markets will be in an equally hazardous and uncertain position.

The experiences of last season have already altered the policy of many Tasmanian growers, and everything points to a bigger percentage of the crop being next year forwarded to interstate markets. Fruitgrowers must see that their interests are interdependent and the action of a body in one particular State may have a far-reaching effect on another section in another State. An organisation on national lines is long overdue, and until such is inaugurated, the hazards

and risks of marketing must increase instead of decrease.

### Apple and Pear Grade Standards.

At the recent meeting of the Apple and Pear section of the Australian Fruit Council, the grade standards for overseas export were again reviewed, and the long requested amendments brought before the Minister of Markets and Migration.

The amendments, which briefly, are designed to make the grades more practicable and give greater facility of operation, are principally confined to the percentage of blemishes allowed in the "plain" grade, and also the method of sizing.

It is interesting to note that after four years of discussion and consideration, the grades are now back to the requirements that were in force in this State, which adopted the measure in 1918, and had subsequently been amended to what was considered satisfactory after four years' experience of their operation.

### Fruitgrowers' Union.

Prompted by the unsatisfactory conditions that are existent in their industry, and the many disabilities they are laboring under, a number of orchardists in the Huonville districts have inaugurated a Union, which is aimed to embrace the fruitgrowers throughout the State.

There is no doubt that any organisation on these lines that would embrace the majority of the producers would be of material assistance in solving their apparent difficulties. The position at present is that already there are several Associations that claim that if the growers would only enter their ranks in sufficient numbers they would be able to effect a number of the desired improvements. Unless these can sink their differences, and weld themselves into one united body, they will be always in a more or less unsatisfactory position. If the new Union can accomplish this, it will indeed have registered an important development in the industry.

### Markets and Migration Commissioners.

We have recently received a visit from the Commonwealth Commissioners of Markets and Migration. Messrs. W. Nathan and J. Gunn, together with Mr. H. Rose.

After a tour through the Huon districts, Mr. Rose now remains in Tasmania in order to carry out an economic survey into the principal primary industries, commencing with fruit.

The work which is to be undertaken is of a very complete order, and will be directed toward ascertaining the various weak links in the

different industries, and if possible, eliminating them.

Mr. Rose is at present operating upon an area in the Huonville district that is representative of the southern industry, and receiving the earnest co-operation of the growers in obtaining the necessary information.

### ORCHARD OPERATIONS.

(By P. H. Thomas, State Fruit Expert.)

**M**OST ORCHARD SOILS have now been brought to a suitable tilth for conserving the moisture throughout the "growing period." From now onwards it will be necessary to keep the harrows going, especially after a rain, so that a surface crust does not form. Attention to this matter will play an important part in the setting and development of the young fruits.

#### Fruit Shipments

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#### Spraying.

**Black Spot.**—The season has so far been conducive to the development of fungus diseases such as "black spot," and growers must be prepared to combat possible infection. A close supervision should be exercised over susceptible varieties such as Cleopatra, Delicious, Sturmer Pippin, Crofton, etc.

If found necessary, the "Delayed Dormant" and "Pink" sprays should be supplemented with further application of (Bordeaux 1-1-40), upon hard varieties, and (lime sulphur 1-50) upon those of a tender-skinned nature. It is not advisable to increase the strength above these formulae after the petals are fallen, especially if they have not been preceded by the earlier treatments.

**Codlin Moth.**—During the early portion of the month the moths will be on the wing and egg-laying will have commenced in most districts.

The first arsenate of lead spray should be applied at the calyx stage, i.e., before the calyx closes, as the early larvae show a preference to operate from this point in making ingress to the fruit. This is an important spray, and not only kills the early grub but also controls a number of caterpillars and beetles that attack and injure the young fruits. To obtain the best results the average powdered form of arsenate should be applied at a strength of at least 1 lb. to 30 gallons and paste at 1 lb. to 18 gallons. The introduction of an efficient "spreader" gives greater adhesiveness and a better cover.

**Powdery Mildew.**—Badly infected varieties that have been treated with the iron sulphide mixture at the dormant period may require a further application to effectually control this disease. At this stage either iron sulphide or atomic sulphur may be used. The latter is mixed at a strength of 1 lb. to 12 gallons of water and may be combined with the arsenate sprays if desired.

#### Re Working Fruit Trees.

Unsuitable or unprofitable varieties that have been grafted over to other kinds will require attention. A number of growths will now be showing from the base of the limbs that have been treated. Do not remove any of these until the graft has made fair growth and maintain a fair proportion to ensure that a better balance is preserved between the roots and foliage. These growths may be occasionally "stopped back" to stimulate the development of the grafts. A strong suitably placed growth should also be selected upon limbs that have "missed" for "budding" during February and March.

#### CARDIFF.

#### A Great Distributing Centre.

In food distribution, the shorter the journey, and the fewer the handlings, the more satisfactory will the results be to all concerned. In the movement for port decentralisation, the claims of Cardiff must not be overlooked.

Cardiff is geographically nearer to the Dominions and Colonies than any other English port, and is the market city-port of a wealthy industrial area. It is the commercial and industrial capital of Wales, and the economic centre of distribution for a population of 4,000,000 within a radius of 50 miles, and over ten million within 100 miles radius. The consuming power of this huge population (one fourth that of the United Kingdom), engaged principally in in-

dustrial pursuits, is probably greater than in any other industrial area in the country.

Cardiff has adequate dock, cold storage, and warehouse facilities, and direct railway communications from the dock side to all parts of the country, enabling quick discharge and rapid transit to destination.

Cardiff is known as "The Covent Garden of the West," and probably possesses more retail fruit shops than any city of similar size in the country. The first direct shipment of Canadian Apples (5,000 barrels) was received in 1921; last season the amount reached 200,000 packages. During the 12 months ended June, 1925, the imports of fruit, including Oranges, Apples, Grapes, Mandarins, Lemons, Melons and Pomegranates, totalled 569,994 packages.

In the case of Apples from Australia and New Zealand, which are received via London or Liverpool, the

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**H. JONES & CO. LTD.,**  
HOBART

handling and rail charges thence to South Wales average 2/6 to 2/9 per box of 56 lbs. If imported direct to Cardiff, the dock charges, including delivery to truck or lorry, average only 3d. per box, this representing an increase of say 2/3 per case to the producer.

Cardiff also offers an attractive market for other foodstuffs, and firms there are encouraging direct imports, which will benefit both producer and consumer.

The above facts are gleaned from two useful booklets, entitled "Cardiff the Great Distributing Port," and "Cardiff Facts Worth Knowing," issued by the Cardiff Development Department. These booklets and any other information required may be had free on application to the Development Agent, City Hall, Cardiff, South Wales.





### UNDER THE MOST EXACTING TESTS "KARSWOOD" Proves its Ability to Make Hens Lay

**U**NDER the most exacting tests Karswood Poultry Spice is continually proving its ability to induce fowls to lay regularly, no matter what the time of the year or what the temperature may be. It does this because it contains the stimulating and egg-forming constituents that a fowl naturally requires for continuous egg-laying. We repeat, "Karswood" induces fowls to lay; not suddenly, but gradually; first, by building up a fowl's nervous system and then by supplying the vital ingredients on which the egg-cells naturally form and grow. Karswood, definitely, does not force or injure the health of a hen. Karswood is, therefore, really a help—an aid to egg-production which is being proved by thousands of poultry owners throughout Australia, many of whom gladly and enthusiastically attest to the marvellous results obtained from this wonderful poultry spice. What would you give to have your fowls laying like those mentioned in the testimonials below?

#### Nearly Double the Number of Eggs.

Dear Sirs,—

I would like to express my appreciation of Karswood Poultry Spice. Since using same I get nearly double the number of eggs, and the hens get over the moult much quicker. I have used Karswood for years, and would not use anything else. I have recommended Karswood to a number of friends, and their experience has been the same as mine. (Sgd.) VERA SHERWILL.

Officer, Vic.

#### Nearly 23 Eggs per Month.

Dear Sirs,—

Six Black Orpington pullets fed once daily on Karswood Poultry Spice laid 396 eggs from 5th August to 31st October. The last month they laid 160 eggs. Fifteen pullets of the same breed, from 1st August to 31st October, laid 626 eggs, which had not Karswood Spice. I am sure Karswood is the best egg producer on the market, and will always recommend it. The figures equal—

23 $\frac{3}{4}$  eggs per month with Karswood.

13 $\frac{1}{2}$  eggs per month without Karswood.

October the Karswood birds increased their record to 26 $\frac{1}{2}$  per bird. (Sgd) L. J. COLEMAN  
Don Road, Devonport West, Tas.

#### Make This Test.

Go to your local grocer, storekeeper, or produce dealer. Get a 1/- packet of Karswood Poultry Spice, then give it to half-a-dozen of your birds, in accordance with the directions on the packet. Do not expect immediate results—Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

#### SUPPLIES.

Karswood Poultry Spice is obtainable from all stores and poultry food suppliers at the following standard prices:— $\frac{1}{2}$ lb. packets, 1/-; 1lb. packets, 2/-; 7lb. tin, 13/-; 14lb. tin, 25/-; 28lb. tin, 48/-.

If your local dealer cannot supply you, write direct to Messrs Henry Berry & Coy. Pty. Ltd., 568-80 Collins Street, Melbourne, adding postage (6d. on  $\frac{1}{2}$ lb. packets and 9d. on 1lb. packets) to the above prices.



### POULTRY PARASITES.

**P**ARASITES will make their appearance with the hot weather, and extra attention should be paid to them.

In treating birds for these parasitical pests, different treatments should be adopted for each, owing to their differing habits.

The hen body-louse and like species live entirely on the skin of the fowl, and are mostly found in the cavity under the root of the tail, and to a lesser extent about the body.

This parasite lays its eggs at the base of the feathers, principally about the posterior parts of the bird and sometimes under the wings.

In cases of heavy infestation they appear clustered about the base of the feathers against the skin and the main thing to be remembered in dealing with this parasite is that it is useless to spray houses or oil perches in an effort to control it.

The most efficient method of clearing those fowls infected is to either clip off the masses of eggs, or touch them very lightly with salad oil.

Kerosene should never be used, as it burns the skin.

If these control methods are overlooked, and the parasites hatch out, there is nothing equal to flowers of sulphur, dusted through the feathers as an effective insecticide.

To do the job thoroughly, the sulphur must be worked right into the skin.

The process should be repeated in about eight days, when the trouble should be at an end for the time being.

An excellent preventive will be found in adding flowers of sulphur to the dust bath.

### GREEN FEED FOR CHICKENS.

The rapidly developing chicks must have vitamins. They are obtained only in natural foods, green stuffs and the like.

Give it to them chopped; it is easier for them to get at it that way. From

the green stuff they receive they will obtain most of the essential minerals necessary to building a healthy bird.

Both growing chick and laying hen need lime in assimilable form. Again, green feed will provide this essential bone and shell forming element, so keep them well supplied.

Plenty of green food is doubly necessary in the warm weather; it helps them to resist the heat, and keep cool, so keep the supply plentiful and constant.

When there is no possibility of the birds getting at food in a natural way, it is a good rule to err on the side of over-feeding than not to give them sufficient.

### "APTO'S" TABLE POULTRY TALKS.

Viewed from the standpoint of previous winters, the month's supply of table poultry has been generous enough although not so heavy as the previous month, and higher values have quite made up for the lesser numbers handled.

From start to finish cockerels have proved exceedingly dear, White Leghorns and colored sorts of all sizes, selling to keenest competition. The present demand for cockerels cannot be adequately met, and good prices should rule for many a day to come. True enough, not a few hard driven poulterers expect Cup Week, with its great exodus to Melbourne, to yield relief by way of much lower cockerel rate; but we rather lean to a belief that while a struggle may ensue between buyers and salesmen and some bumpiness may consequently be experienced, values in the main should not suffer to any untoward extent.

Hens, plentiful enough in spite of some ups and downs, have ever ruled dear, the final sale of the month showing a pleasing advance, especially in White Leghorn varieties, and everything considered, we feel justified in forecasting a continuance of at least good prices.

It is a remarkable thing in connection with these recurring times of dear feeds and consequent crisis, that while one set of breeders is driven to the wall, or at least loses heart, and proceeds to sell out or seriously reduce flocks, another and more experienced set of farmers as assiduously buys in; it is as a result of such in-buys that such good money has been forthcoming for special clearances which have been of weekly frequency.

Muscovies have not proved to be a gold mine to most breeders this season, for although 10/- or so for ducks

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of say 13 weeks, and round about 15/- for drakes of similar age, may seem good money, feeds and all-round cost of production have been extremely high and duck farmers are not generally affluent these days. One thing is certain—that unless special facilities exist for food procurement, ducks should be left severely alone, at any rate for the time being. These remarks are applicable to English and Indian Runners also.

The glory has departed from turkeys, there being usually under the dozen coops at each sale. Fortunately high prices rule, and it seems certain that with Christmas on the home reach, no cheapness should be manifested this year.

#### "APTO" Sale Prices Realised.

Poussins, 1/- to 2/6; grillers, 2/9 to 6/6; W.L. cockerels, 7/- to 12/-; colored cockerels, small, 8/- to 9/6; medium, 10/- to 12/-; heavy, 12/6 to 18/-; W.L. hens, 6/6 to 8/-; colored hens, light, 7/- to 7/6; medium, 8/- to 9/-; heavy, 9/6 to 11/6; Muscovy ducks, 9/- to 10/7; Muscovy Drakes, 11/3 to 16/9; English, 10/11 to 11/1; Turkey gobblers, 26/6 to 56/-; turkey hens, 17/6 to 23/6; guinea fowls, 10/7; squabs, 3/- to 4/10. (All prices at per pair.)

#### BEEKEEPING NOTES.

##### What Observation Shows.

##### From the Outside of the Hive.

The experienced apiarist is able to tell from observation of the working force on the outside of the hive just what is the condition inside. He can thus save many general examinations and is able to manage larger apiaries in an efficient manner.

It is quite logical that any trouble inside the hive must be reflected on the working force, and a walk around the hives should in most cases show

which colonies require attention. We cannot, of course, do away with the general examination, but it can be cut down to a minimum. If a general examination is made during the spring and the condition of each colony is carefully noted, outside observation will show for quite a time afterwards whether the colony is doing as well as can be expected. If "dwindling disease" or "paralysis" is present in the hive, the diseased bees will be clearly on view about the entrance. A colony weakened by brood disease (foul brood) must show a decline in the working force and have a listless appearance compared with the healthy stock; but where brood disease is present in the apiary a greater number of general examinations must, of course, be made, so that the disease can be discovered and treated in its earliest stages.

If the colony is queenless there will be a slackening down in the work, and a lesser quantity of pollen being brought into the hive. Pollen, being chiefly used for feeding larvae, will not be required to any great extent in a queenless hive. Exceptional progress and ever-increasing activity of the field bees during spring time gives warning that sufficient accommodation must be provided to minimise swarming.

The clustering of bees about the entrance when the hot weather comes on shows clearly that the bees require additional ventilation.

A honey flow is evident from the flight of the heavily laden bees. There is quite a difference in the flight of a bee with a full load of honey and one flying light. Then we have the odor of new honey about the hives—such a distinctive odor at times that the source of supply can be determined from it. There is quite a different sound—a low droning—about the flight of bees during a honey flow.

A further note of progress that is observable from the outside of the hive is the practice flights of the young bees. In a progressive apiary during the warm part of the day, thousands of young bees come out to try their wings, and sometimes the beginner considers that a swarm is issuing.

It may thus be seen, that not only is a good knowledge of the inside of the hive desirable, but observation from the outside is of much value too.

#### BEEES IN THE ORCHARD.

In the Antelope Valley, California, states an American Exchange, a great many Bartlett or W.B.C. Pears are raised, and the bees help in their cultivation in a systematic manner, since practically all of them are leased to Pear growers for purposes of pollination. The growers pay a certain amount for each hive, and the proportion is about one hive to two acres of Pear trees. The Winter Nelis, which is the Pear most used as a pollinator in this valley, comes into bloom a few days ahead of the Bartlett, and the bees then do their stuff, helping the cause along. The growers state that the increased yield more than pays for the expense of renting the bees. The bees, too, earn a little extra in this way for their owners.

The boys of the agricultural department of the Antelope Valley Union High School give considerable attention to the study of bees and this phase of it. One of the teachings of this department is that every home should have at least two or three hives of bees to supply the family with this most healthful sweet.

"Jock, ye may aye be puttin' in a tree; it will be growing. Jock, while ye're sleeping."

## Complete Riddance of Citrus Insect Pests

Put aside doubts and prejudice and avail yourself of Cyanogas fumigation to ensure complete riddance of Citrus Insect Pests from your orchard. Users are most enthusiastic over its unvarying efficiency. You will be, too. Commonsense, as well as economy, urges it. Government authorities recommend it. Over 250,000 trees were treated in Australia last season.

Quite safe. Easily done in the day-time. Eliminates frequent spraying, and one application gives two or more seasons' freedom from trouble. Think what this means to the yield and healthiness of your trees.

Any of the following distributors will freely give you advice and full particulars concerning

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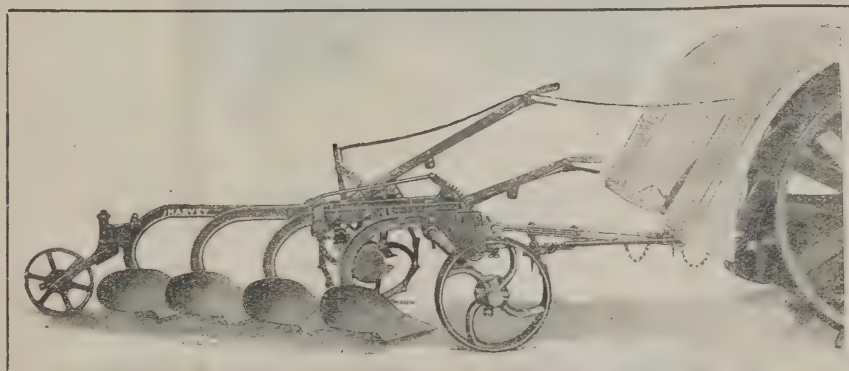
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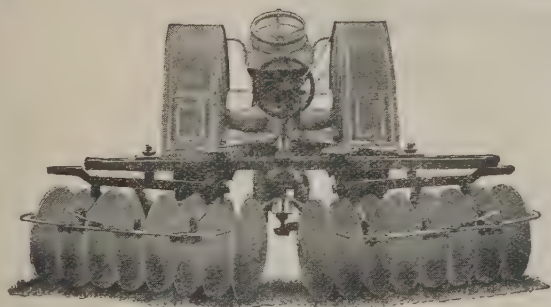
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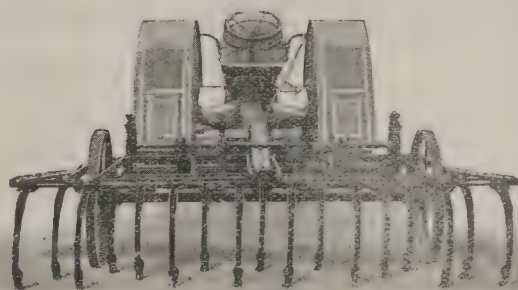
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"Harvey" Two-way Power-shift Reversible Disc Cultivator for "Fordson" use

Made in sizes from 12 to 16 plates. These can also be had in Tandem Models, in sizes from 20 to 32 plates, reversible if required, or can be reduced to two-way machines



"Harvey" Light Rigid Tyne Cultivator. Automatic lift

Can also be had in Spring Tyne Models. Supplied in sizes 15-17 and 19 tynes, cutting 7 ft. 6 in., 8 ft. 6 in. and 9 ft. 6 in. We also manufacture heavy duty Power-lift Rigid Tyne Cultivators. Write for illustrations

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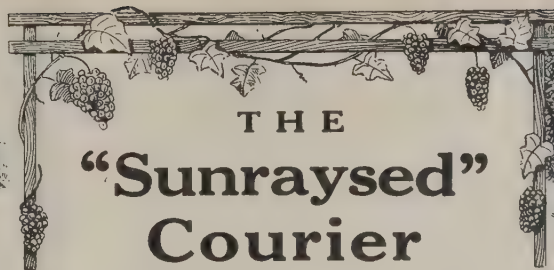
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## THE "Sunrayed" Courier

### A.D.F.A. STATE CONFERENCE.

The Annual Conference of the Victorian section of the Australian Dried Fruits Association, was held at Nyah West (Vic.), on October 6, with a representative attendance of delegates. Amongst other business it was decided that the Federal Government be asked to appoint a resident Trade Commissioner in Canada, and to expedite the reciprocal trade treaty with New Zealand.

The work of the Growers' Political (non-party) Committee was reported on, the need for this kind of organisation being stressed.

Mr. H. Corbould (Mildura Growers' Union) speaking re the descriptions of Muscatels, moved that the regulations be altered to omit the terms "layers" and "clusters" for Muscatels, that "seedless Lexias" and not "muscats" should be used for those berries, seedless Waltham Cross Raisins, the production of which was very limited being also classed as "seedless Lexias" for uniformity. After discussion the motion was carried.

**Packing Sheds.**—It was urged that the present method of rendering account sales to give the grower the benefit of the Australian market in each grade, should be incorporated in the regulations, and that the Federal Council should endeavor to have all packing shed scales tested prior to the beginning of the packing season.

It was decided to ask for the appointment of a Government inspector for every shed packing 200 tons or more fruit, the necessity for better choice of inspectors and supervisors being urged. The Export Control Board was to be asked to return to packing-sheds a duplicate return of London sales, and more active propaganda was recommended. Other recommendations dealt with unsatisfactory packing sheds, control legislation in other States, scientific experiments for the efficient mixing of fruit before processing.

The following were elected delegates to the Federal Council:—Messrs. Johnstone and Sloan (Mildura Co-op.), Rawlings and Roberts

(Mildura A.D.F.A.), M. Young (Aurora), G. H. Badger and Kerr (Red Cliffs A.D.F.A.), H. Corbould (Sarnia), Captain Halhed (Merbein Packing Co.), A. R. Lawrence (Nyah), and D. A. Cockcroft (Woorinen).

### DRIED FRUITS CONTROL.

#### S.A. Government Bill for Continuance.

The S.A. Minister for Agriculture (Mr. Butterfield), has announced his intention of introducing a Bill for the re-enactment of the State Dried Fruits Control Act for a further term of three years. A deputation recently waited on him to present a petition signed by 714 growers representing over 6,000 tons of dried fruit, urging the renewal of the Act.

In reply the Minister stated that he anticipated no difficulty in carrying the measure. He understood a similar Bill was to be introduced in Western Australia.

### VINE CROP PROSPECTS ON THE MURRAY.

Mr. C. G. Savage, R. D. A., Deputy Horticultural Instructor and Manager, Berri (S.A.) Experiment Orchard, writing on October 14, said:—Every settlement reports a good bud burst, and indications all point to a splendid crop in both trees and vines. The unsettled weather of the last fortnight has set up disorders in the vines; most of them are physiological and should disappear as the warm weather sets in. Most settlements advise that "black spot" is in evidence in the vineyards to a more or less degree, though up to the present no very serious trouble is expected. Growers are busy spraying the vines with Burgundy or Bordeaux mixture.

### DRIED FRUIT SALES.

#### Satisfactory Prices.

Melbourne (20/10/26).

An average price of £67/10/1 a ton was obtained for 448½ tons of Sultanas, the sale of which was regis-

tered with the London agency of the Dried Fruits Export Control Board during the week ended October 14. The sales of 180 tons of Currants averaged £38/14/6, and 13½ tons of Lexias averaged £37/17/11.

These realisations brought the total sales this season to:—Sultanas, 4,948½ tons, averaging £70/5/-; Currants, 2,784 tons, averaging £42/7/2; Lexias, 423½ tons, averaging £38/10/7.

These sales are regarded by the Board as satisfactory in view of the very adverse conditions ruling in Great Britain. The prospects are good and an improvement in demand is expected as soon as the coal strike situation improves.

### VINE GRAFTING.

During the Congress of the Australasian Association for the Advancement of Science, held at Perth during August, Mr. F. de Castella, (Victorian Government Viticulturist), read a paper dealing with the outcome of an inquiry into the results achieved by the Victorian vineyards, reconstituted on phylloxera resistant stocks.

He said that a questionnaire was sent to all growers who had been supplied with resistant vines from the State vine nurseries during the past 25 years. From a detailed examination of the 52 replies received, the following conclusions might be drawn:—

1. Reconstitution on phylloxera resistant stocks had proved a marked success in those parts of Victoria where it had so far been carried out. The great majority of growers were altogether satisfied with the results obtained from their replanted vineyards.

2. The soil conditions in the reconstituted areas were very suitable for resistant stocks. Soil adaptation troubles, so frequent in other countries, were rare in this State. The problems which confronted vigneron concerned the suiting of scion to stock, rather than that of stock to soil conditions.

3. The suiting of scion to stock



was of very real importance. Troubles occasionally presented themselves in the shape of curious incompatibilities, concerning which the only reliable guide was previous experience. Their number was, fortunately, small. Undesirable combinations (stock and scion) were of two types—(a) those where affinity was faulty, caused the grafted vine to decline and die at an early age; (b) too exuberant growth at the expense of fruit production. The tables given showed the combinations which had proved satisfactory and otherwise in Victorian vineyard practice.

4. Among stocks which showed a wide range of suitability for different scions might be mentioned 3,309, 3,306, ARG1, and 420A. Among stocks for which the choice of scion was less easy, were 1202, Metallica Cape, 101-14, and, to a lesser extent, Rupestris du Lot. The chief fault of the last named was excessive growth at the expense of fruit production.

5. Scion varieties were also "easy" and "capricious." Shiraz, Uni Blanc,

### UTILISATION OF VINTAGE WASTE.

Enquiries were instituted some time ago by the Minister for Markets and Migration into the commercial utilisation of vintage waste in France. In the course of reports received it is stated:—

"The question of obtaining oil from Grape pips is becoming more important every day. At the last meeting of the Academy of Agriculture, it was pointed out that the extraction of the oil was being developed on a great scale in the South of France. The oil has similar lubricating qualities to those of castor oil and could be employed in aeroplane engines. France could produce 75,000 tons of this oil per annum, which amount would be more than sufficient for her wants in case of war. There is no doubt whatever that this industry will be developed to the utmost in France."

### "THE SMALL FRUITS OF NEW YORK."

(By Edward E. Pescott, F.L.S.)

UNDER THIS TITLE, another fine work has been added to Pomological literature this year. This is the seventh and last book of the series issued by the New York State Experiment Station, at Geneva; six of them, including the present one, being written by the talented Vice-Director of the Station, Dr. U. P. Hedrick. With the exception of the "Apples of New York," all the volumes are of large quarto size; and in the preface, it is announced that this work will be possibly revised and made uniform with the other fruit books issued.

These monographs on fruits have been given world-wide appreciation, and the "Gardener's Chronicle" of England, discusses them as pomological works of a century. They are certainly very wonderful and valuable books; they quite exhaust the subject; and as works of reference are invaluable.

This new book is equally as important as its forerunners, for it deals with a class of fruits so much needed, and of which we have so little literature, viz.: small fruits. The subjects dealt with in the book are, Raspberries, Blackberries, Black Raspberries, Dewberries, Currants, Gooseberries and Strawberries. There are nearly 600 pages, packed with valuable information, botanical, pomological, and practical. There are nearly 100 illustrations in full color and natural size,

showing the best of the fruits discussed. Even remembering all of Prof. Hedrick's works, it must be said that these illustrations are among the finest we have ever seen—they are magnificent. The fruits and foliage show their bloom, shading color, and attributes with wonderful life-likeness. Of small fruits illustrated in color, we have never seen anything to equal these.

It is interesting to note that the Loganberry is classed among the Dewberries. Three years ago, Professor L. H. Bailey considered the Loganberry to be of sufficient importance to be raised to specific rank, and he named it *Rubus loganbaccus*. Prof. Hedrick does not agree with this determination, and he considers it to be a "mutant offspring" (sport) of *Rubus ursinus*, one of the native Dewberries. He also states that the term "Loganberry" has come into general use as a group, rather than a varietal name.

The origin of the Loganberry is well known, and has been discussed

## T. STOTT & SONS Fruit Merchants

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in these pages before. Judge Logan considered it to be a cross between the Raspberry and *Rubus ursinus*. Later botanists consider it to be a variety of the western Dewberry.

Dewberries are usually "larger, sprightlier, and juicier" than Blackberries, and often more delectable. They usually ripen earlier, are more productive and possess a longer fruiting season than Blackberries.

Quite a number of Dewberries are described in the book, and it would seem that we possibly grow the best of them already in the Commonwealth. These are Lucretia, Phenomenal and the Laxtonberry. It might serve a useful purpose if Mayes, a vigorous hot-country type, and productive berries of a good quality were introduced. All of the other varieties

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Sultana, and Waltham Cross were easy scions, and gave good results on most of the leading stocks. Among capricious scions might be mentioned Tokay, Ohanez, and Malbeck.

6. The influence of the stock on fruit production, though marked in some cases, was variable in others, and depended on several factors. Stocks which promoted heavy growth, sometimes reduced yield.

7. Concerning the influence of the stock on resistance to drought the evidence was somewhat indefinite, and sometimes contradictory. In properly tilled vineyards, the drought resistance of vines grafted on the leading stocks was generally satisfactory.

recorded seem to belong to the "also ran" class.

The illustrations of the Currants are among the finest in pomological literature. Of Black Currants, the old favorite, Boskoop Giant, holds its own. There seems to be a difficulty, even in America, of getting plants true to name. Naples is the variety more commonly grown in America than any other. Of red Currants, Wilder seems to be the favorite on account of its size and productivity. Chatauqua is recorded as producing canes ten or twelve feet in height. These canes are trained on walls or fences and they are very productive. This is recorded as the best red Currant grown on the experiment station. Cherry has short stocky bunches of fruit, and is very popular for home gardens.

The Gooseberry is recorded as not being a popular fruit in America, on account of the toll taken by fungous diseases. Yet America is favored with its own wild Gooseberries. There are many named varieties which are quite unknown to us in Australia. Chatauqua and Industry (Whinham's Industry) are considered the best types. The former is hardly known here. It has a fine large greenish-yellow berry. Red Warrington is little grown in America, but its good qualities are recognised. It is strange that Roaring Lion is not considered at all useful. In New York the plants lack vigor and are very subject to mildew. Billy Deans is not even mentioned.

America is rich in Strawberries. The book lists very many varieties, over 30 being illustrated. This fruit is extensively cultivated, and in the woods, wild Strawberries grow abundantly. There is an acreage under cultivation of Strawberries of 119,395, yielding 176,931,550 quarts annually. These are big figures.

The list of varieties discloses many names with which we are quite unfamiliar; and the illustrations make us wish that we could see many of them growing here. In many cases the berries are huge. One variety that is illustrated and described is Dunlop. It appears to be a large and very beautiful berry, and when Professor Hedrick records it as "perfect," it must be worth having. Another variety placed in this class is Gandy, a larger fruited form, and darker in color. One looks in vain for the names of the varieties that we grow here, and wishes that we had some of the good American varieties.

The book is a notable example in pomological work. We have many books on the larger fruits, but this

one on the small fruits is exceptionally welcome, especially as it comes from such an experienced worker in fruit classification.

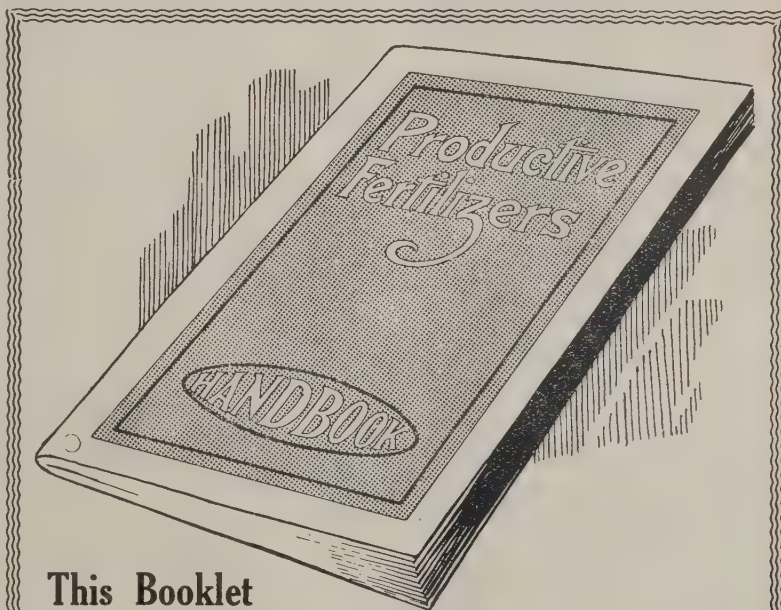
#### APPRECIATION FROM DR. HEDRICK.

We recently received a letter from Dr. U. P. Hedrick, of the New York State Agricultural Experiment Station, Geneva, N.Y. U.S.A., whose series of books on "The Fruits of New York," is so well-known. In this Dr. Hedrick said:—

"I have just come home from Europe, where I have spent the last six months, and was pleased, indeed, to find in the 'Fruit World' your appreciative references in regard to the white medal which was awarded me last autumn. Thank you very much for your kind words.

"Australia and New Zealand are a long way from New York, but it would seem from the very kind letters that come from fruitgrowers in these two distant regions that our work at this station is of considerable interest, and some profit to your fruit-growers. If this is true, I am very glad, indeed, and shall hope that I can continue to be of service to you through whatever literature we may send out, and possibly through some of our new fruits. This leads me to say that I am doubtful whether you have received our bulletins entitled, "New or Noteworthy Fruits," and I am, therefore, asking that as complete a set of these as can be had, be sent you."

The set of bulletins has come to hand, and will be referred to in greater detail later.



### This Booklet

which was compiled primarily to advertise

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gives a wealth of information concerning fertilisers generally, and its circulation has helped considerably in the education of the orchardist to a better-paying fertiliser practice. Many copies have been circulated to students of agriculture and horticulture throughout the Commonwealth and New Zealand, and some significance must be attached to the greatly increased sales of Sulphate of Ammonia since its publication

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## Queensland

### Report of the Committee of Direction. Banana Disease

THE SECOND ANNUAL REPORT of the Committee of Direction of Fruit Marketing, covering the period from July 1, 1925, to June 30, 1926, is interesting. In the foreword it is stated:—"At the end of the second year of our operations, we can look back with satisfaction upon the solid results that have been achieved in spite of immense difficulties. . . . The efforts of our organisation are directed exclusively to securing for the fruit-growers a fair and adequate return for their labor. Our two and a-half years' work has brought us much nearer that goal. All we ask of the growers is whole-hearted support. . ."

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**PROMPT RETURNS**

#### Achievements of 1925-26.

In amending the original Act, an important feature has been introduced whereby, before any control can be effected by the Committee, notice of intention to issue a direction shall be published. If within 30 days of such publication, 30 growers of the commodity affected demand a poll, then a ballot shall be taken, and 66-2/3 per cent. must vote in favor before such control can come into operation.

Since the passing of this amendment the Committee has issued notice of its intention with regard to two commodities only:—(i.) Pineapples for factory purposes; on a poll being taken, 88 per cent. voted in favor of control. (ii.) Strawberries, for factories, this was not challenged.

#### Finance.

Finance was seriously affected by the abolition of the policy of limi-

tation of agents. The rebate obtained previously was about £6,000 a year. In spite of this loss, however, a net profit of £5,842/17/4 has been made.

#### Pineapple and Citrus Levies.

When control was first exercised in Pineapples, a levy of 1d. per case was imposed in 1925. In 1926 this was reduced to 3d. per case, as the initial difficulties had been overcome. The reserve from this source now amounts to £1,101/5/7.

A levy of 1d. per case on Citrus fruits was imposed in 1926. No definite policy re Citrus has been decided.

#### The Pineapple Industry.

Pineapple growers now receive 4/3 a case, an advance of 1/9 since 1923, or an increase of 70 per cent.

Though larger quantities have been canned, conditions have vastly improved since the Committee assumed control in 1924. In 1909 there were only 70,000 dozen Pines canned, and in 1924 265,000 dozen. Next year the figure leaped to 310,000 dozen, while in 1926 the summer pack alone amounted to 158,000 dozen.

Through the Committee's arrangement for selling the whole of the Queensland output of canned pines to one firm, the growers have been assured of a fixed price, buyers have been able to operate with confidence, and the canners have had their output sold in advance; distribution has improved and the demand in Australia has increased; it is now considered unlikely that export will be necessary.

#### Strawberries.

The price of jam berries is the determining factor in profit or loss; a few years ago growers received as low as 3d. a lb. At growers' requests the C.O.D. arranged to sell the jam output, and accordingly growers will be paid 6½d. per lb. nett, and the industry has been stabilised.

#### Deciduous Fruits.

Stanthorpe growers experienced a much better season than for many years past, chiefly due to the absorption by the factories of surplus supplies. As the result of propaganda, more jam is being eaten locally, and the factories have agreed to take all surplus Plums and Peaches next season, and a largely increased quantity of Apples. Peaches are being canned

for the first time in Queensland. Prices are as follows (f.o.r., Brisbane), in every instance cases being supplied by the manufacturers:—Plums, £12 per ton; Peaches (a), for canning, £11/6/-; Clingstone, £9/6/-; Freestone (b), for jam, £8; Tomatoes, £6, later increased to £8.

The equivalent value on the Brisbane market is:—Plums, 4/4 per half-bushel case; canning Peaches, 3/5; jam, Peaches, and Tomatoes, 3/1. All growers must direct a percentage of their crop to factories when so advised, or the market will be broken for all concerned.

#### Transport.

Special fruit trains were run daily (Sundays excepted), from December to April, total tonnage, 8,160 tons. The results of special fruit trains to the north (as far as Cairns), were satisfactory.

#### Banana Marketing.

In open competition, the Brisbane Banana selling floor of the Committee realised prices which compared more than favorably with those obtained by agents. In 12 months, on the Committee's floor, 2,614,093 dozen Bananas were sold for £45,411/8/8, or an average price for the year of 4-3/16d. a dozen. There was a profit of £640, besides a refund of 1½d. per cent. of commissions charged.

During the year under review, growers decided to return to the system of open marketing.

#### Fruit Distribution.

The Committee is operating three lines of distribution—wholesaling, retailing, and the country order business. The wholesale business includes the selling floor for green Bananas; general fruit section, which showed a profit of £106 on 6½ months' trading; Rockhampton fruit section, which in ordinary competition handled 80 per cent. of the fruit, and showed a profit of £58 after writing off depreciation. The country order department has grown rapidly, and showed a profit of £716 for the period.

Two retail shops and two stalls established direct touch with the consumer. The object is to effect maximum sales at a minimum of profit, the profit for the period being £147.

Four fruit barrows were started during the Stanthorpe season, but owing to the difficulty of securing suitable employees, had to be abandoned, a loss of £139 being sustained.

Appendices are added to the report giving details of the Rockhampton and Stanthorpe enterprises, figures regarding fruit movements and shipments to other States, etc;

profit and loss account, and balance sheet.

### BANANA "SQUIRTER" DISEASE INVESTIGATION BY SCIENTISTS.

The "Squiter" disease of Bananas continues to cause grave concern to producers and traders.

On arrival at southern markets from Queensland, the Bananas look all right, but the inherent disease seems to develop during the ripening process, and when the Bananas are sufficiently ripe for retail distribution the diseased condition has developed to such an extent as to render the Banana unsaleable. Owing to the readiness with which the decomposed material can be squeezed out from the end of the Banana, the disease has been named "Squiter."

The Vice-President of the Executive Council (Senator Pearce) stated recently that investigations were now in progress by the Council for Scientific and Industrial Research to ascertain the cause of the disease and its remedy. Arrangements had been made to record the conditions of growth, soil, aspect and weather throughout the whole growing period of the fruit, and to correlate these with the conditions of the fruit developed during transportation and marketing. The work in Queensland was being supervised by Professor E. J. Goddard, University of Brisbane, and examinations of the experimental consignments were being made in Melbourne by Mr. E. MacKinnon, B.A., B.Sc. The Queensland Department of Agriculture was also co-operating in the investigations.

### SUGAR-CANE HARVESTER.

A machine for harvesting Sugar-cane has been invented by Mr. Ralph S. Falkiner, of Brisbane. This machine is the first cane harvester in the world, and was worked experimentally at the end of last season. Mr. Falkiner claims that the use of the harvester will save £600,000 a year on a 4,000,000 ton crop. Its capacity is 40 tons an hour, and the cost for fuel an hour is 5/-. Mr. Falkiner says that his company will cut, top, and load for 4/6 a ton. The average cost a ton last year was 8/-. He added that the world's crop of 150,000,000 tons of Sugar-cane has up to the present been all cut by hand.

### EXPORTING AUSTRALIAN FRUIT.

#### Decentralisation Policy.

#### The Claims of Manchester.

(By a Correspondent.)

**D**ESPITE the severe losses experienced by many shippers last season owing to the abnormal conditions which all imported fruit met with in British markets, next season's arrangements have got to be considered shortly, and a decision must be arrived at in regard to the disposal of surplus crops.

It is earnestly hoped that the effects of the disastrous general strike and later industrial upheaval in Great Britain will have been sufficiently overcome by the time export commences again, to enable fruit-growers to anticipate a reasonably favorable season, but if the position should resolve itself into what may be regarded as a choice of two evils, it will be well to consider what lessons can be learned from the experience of the past season, and how unduly heavy distributing costs must be avoided.

Advices recently received make it evident that the disorganisation of transport services which followed the general strike resulted in enormous quantities of fruit and other perishable produce being held up in London in excess of local requirements, whilst some of the centres in the northern and midland counties were actually short of supplies; it is not surprising, therefore, that during the greater part of the season prices ruled higher in the principal provincial markets than in London.

Although there may be little danger of a repetition of last season's experience, not a single convincing argument can be advanced for continuing to land fruit and other perishable produce hundreds of miles away from millions of consumers in the northern and midland counties, when there are more convenient and economical ports at their door.

It has been persistently urged by the Manchester Ship Canal Company during recent years that the policy of decentralisation of shipment is in the mutual interests of producers and consumers; that this confidence is based on sound grounds is proved by the fact that one of the largest firms engaged in the importation and distribution of dairy produce, provisions, etc., in the Manchester area, has requisitioned for sufficient direct tonnage from N.Z. ports to Manchester, to convey many thousands of tons of

dairy produce during the present season.

The head office and principal business of the firm in question is in London, with branches at various provincial centres, including Manchester, so that their decision to order the direct shipment of so large a quantity of dairy produce for distribution from Manchester, following upon several years' experience of such policy, proves they are satisfied there is a substantial advantage in supplying their customers in the northern and midland counties via Manchester.

If such is the case with dairy produce, it is equally applicable for meat, fruit and other perishable commodities.

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APPLES.

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### FOR STENCILLING CASES.

For the stencilling of cases, good materials are desirable. Bright, bold marking is attractive, and pleases buyers; legibility assists railway freightage.

Caldwell's stencilling inks, Australian made, are of high quality, and eminently serviceable. The inks are put up in cake or liquid form: their utility is so favorably known that the many prominent manufacturers and others using cases use Caldwell's stencilling inks exclusively. In fruitgrowing districts local agents are wanted, and application should be made to Caldwell's Pty. Ltd., Yarra Bank-road, South Melbourne.

We have never missed a copy of the "Fruit World." The various articles, especially those on Cold Storage, have been of great assistance to us.—J. C. Norman, Hon. Sec. Agricultural Bureau, Kentucky, N.S.W.



# The Apple Export Trade

## APPLE EXPORT CASES.

### Australian Packages Too Heavy.

The Department of Markets and Migration advises that the following resolution was carried by the Dorchester and District Grocers' Association (England) recently:—

"This Association calls the attention of the Australian Fruit Association to the excessive weights of boxes in which the Australian Apples are packed, the proportion being in many cases nearly one-third the total weight, the boxes weighing sometimes as much as 18 pounds. This means considerably higher charges for rail freightages, as compared with the New Zealand and American packages. Moreover, the weight of fruit is most irregular. This Association asks that the nett weight of Apples should be 40 pounds, in accord with those of other countries."

## THE 1926 EXPORT SEASON.

### A British View.

The Australian and New Zealand fresh fruit season now closing has been dogged by disappointment and misfortune from start to finish, and the closing note is little less than disastrous, says the "Imperial Food Journal." When the season opened the arsenic scare was still fresh in the public mind, and, by a curious irony, the American season was prolonged, and fruit from the United States, with regard to which the scare first arose, often outsold Australasian Apples with an absolutely clean bill of health. The coal dispute and the consequent industrial depression considerably restricted the consumptive demand, particularly for the cheaper kinds. In the closing weeks of the season the market was glutted to an extent that has never occurred before, and prices fell to a level that left the grower with no return, and often entailed him in a loss. To make things worse, one of the holds of a steamer recently arrived was found to contain Apples affected with something that had the appearance of that old trouble "brown heart." Samples have been sent to Cambridge for scientific examination, and, pending the report, it is not advisable to say more.

The Australian season for Apples and Pears is closely followed by that for Citrus fruit, which in this case means almost exclusively Oranges.

The initial shipment was good in quality and condition, except that the skins of some of the Oranges were marked by brown spots, which detracted from their appearance. Still, as the fruit made up to 17/- per bushel case, and 10/- to 14/- for ordinary sorts, it cannot be said that the opening was discouraging. There are, however, comparatively few Australian Oranges afloat this season. Growers and shippers stand to lose so much and to gain so little at the best, that there is scarcely any organised attempt this year to test the British market once more. The consignments we shall receive will be chiefly parcels representing small local surpluses sent more or less experimentally.

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## SWEDISH MARKET FOR FRESH FRUIT.

Fruit cultivation, though comparatively undeveloped in Sweden, due to the rigorous climate, is nevertheless pursued to some extent. As a fruit-growing country, however, Sweden may be considered of minor importance. However, Apples and Pears are grown in Sweden as well as Cherries, Plums, Gooseberries, Currants, Raspberries, and Strawberries. Peaches, Apricots, and Mulberries are grown in certain sections, while Grapes and Peaches are cultivated under glass. Large quantities of fruits are imported each year.

The importation of fresh Apples by Sweden constitutes the principal item of fresh fruit imports. The United States supplies the bulk of Sweden's Apple imports, the most popular varieties being the Ben Davis, Baldwin, Jonathan, Winesap, Newton, Ortleigh, and Spitzenberg. The Ben Davis and Baldwin are principally packed in

barrels, while the others reach Sweden in boxes.

There has been a considerable increase of Apple imports during the past ten years. The United States, which formerly sold Sweden only limited quantities of Apples, is now the chief source of supply.

Swedish fresh Pear imports come chiefly from Czecho-Slovakia, while Spain and Italy supply most of her requirements of Oranges and Lemons. Grape imports come chiefly from Spain. (Based on report from American Commercial Attache at Stockholm.)

## PREFERENTIAL TREATY WITH GERMANY.

### Reduction of Duty on Apples Sought.

At the last meeting of the Victorian Fruit Council, it was stated that by a trade treaty between the U.S.A. and Germany, American Apples received a preference in duty of 1/6 per bushel over Australian Apples entering Germany, and a resolution was accordingly carried, asking that the Prime Minister endeavor to obtain a similar trade treaty with preferential treatment for Australian Apples.

The Acting Secretary, Prime Minister's Department, now advises that the matter will be brought to the personal notice of the Prime Minister in London.

## INTRA-IMPERIAL TRADE—AN AMERICAN VIEW.

The "New York Journal of Commerce," commenting upon an article in the London "Times" on intra-imperial trade, states that:—"Considering the disaffection of the dominions towards proposals to liberalise the preferences accorded Great Britain, it is not likely that they will proceed very fast with agreements among themselves that tend to let down tariff barriers, since they are to a large extent competitive producers of foodstuffs and raw materials. From the point of view of the United States, this attitude is an advantage. If the widely separated parts of the British Empire should ever become firmly united by comprehensive preference systems, so as to present a solid front against the rest of the world while trading with relative freedom behind these barriers, their competition would become a tremendous factor with which to reckon."

To make that "tremendous factor a reality is worth the serious consideration of all sections of the Empire.

# Fruit Crop Prospects

## U.S.A., Canadian and European Reports

The Apple crop in U.S.A. appears to be heavier than last year by about 18,000,000 bushels; Pears show an increase of over 5,000,000 bushels. The Canadian Apple crop is about the same as last season. English fruit crops are light.

THE FRUIT BRANCH of the Canadian Department of Agriculture, in its crop report of August 15, gives the following estimates for the coming season:—

### Canadian Apple Crop Summary.

Canadian commercial Apple crop indicates a slight drop in yield since the July estimate, but it is still about equal to last year's production. The crop is estimated at 99 per cent., or 2,849,430 barrels, as compared with 2,883,400 barrels in 1925, or 80 per cent. of a five-year average. Recent

gains are in British Columbia and Quebec, while slight losses are reported from New Brunswick and Nova Scotia and Ontario remains about the same as the July estimate. Generally speaking the quality of the crop is uniformly good, promising normal size and fairly good color. The following table summarises the commercial Apple crop by provinces in comparison with 1925, and the five-year average:—

[Calculate a barrel at approximately three bushels.—Ed. "F.W."]

### Commercial Crop.

| Provinces.                | Production in barrels.     |            |                  |
|---------------------------|----------------------------|------------|------------------|
|                           | Prospects                  | 1925       | 5-year           |
|                           | by condition Aug. 1, 1926. | crop.      | Average 1921-25. |
| British Columbia .. . . . | 1,208,500 ..               | 932,670 .. | 975,530          |
| Ontario .. . . .          | 714,530 ..                 | 950,130 .. | 1,073,340        |
| Quebec .. . . .           | 142,400 ..                 | 70,850 ..  | 81,260           |
| New Brunswick .. . . .    | 34,000 ..                  | 40,000 ..  | 31,850           |
| Nova Scotia .. . . .      | 750,000 ..                 | 889,750 .. | 1,384,580        |

### UNITED STATES.

#### Apples.

The United States Department of Agriculture estimated the commercial Apple crop on August 1 to be 118,677,000 bushels, as compared with 99,132,000 barrels in 1925 and 90,307,000 of a five-year average.

The crop is expected to be the largest since 1920 and appears to be of fine quality.

#### Pears.

The Pear crop in British Columbia is estimated at 100,960 boxes, as compared with 16,484 boxes last year.

The United States Pear crop is estimated at 25,074,000 bushels as compared with 19,820,000 bushels in 1925.

### ENGLISH FRUIT PROSPECTS.

The English Apple crop situation at present does not promise a very heavy crop. The only production figures available for England and Wales show that in 1924 the crop amounted to approximately 2,738,000 barrels, and in 1923, 3,609,000 barrels, and the crop this year is expected to be considerably less than either of these estimates. Even the largest crop reported is inadequate to supply the demands of the country.

### EUROPEAN APPLE CROP.

Germany, which is an important importing country, is expected to have a small to medium Apple crop. Switzerland and the Italian Tyrol report prospects of a good crop. Belgium, Czechoslovakia and Holland are stated to have only a half crop, due to unfavorable weather conditions, while in Austria the crop is reported to be below average.

It is interesting to note under normal conditions Czechoslovakia exports about 1,000,000 barrels of Apples annually, about 85 per cent. of the crop is exported to Germany, while the balance is distributed between Austria, Denmark, England, Sweden and Holland. With a small crop and the majority of the Apples being exported during September and October there should be very few to offer competition on the European markets during November and December, which is usually the case.

### EUROPEAN PEARS.

European Pears are stated to be more promising. France promises a

(Continued on page 552.)



Fruchthof-Bremen

## Fruchthandel Gesellschaft

Scipio & Fischer

Fruchthof BREMEN Germany

Cable Address: "Orange" Bremen - - - Established 1902

### AUSTRALIAN REPRESENTATIVES:

Victoria: The International Fruit & Mercantile Co., 410-416 Flinders Lane, Melbourne.

West Aust.: Messrs. Paterson & Co., Ltd., Perth.

South Aust.: Messrs. Geo. Selth & McRae Ltd., Adelaide.

Tasmania: Messrs. E. R. Cottier & Co., Hobart.



# The Fruit Trade

## Market Reports and News Items

**REPRESENTATIVE FIRMS. FRUIT MERCHANTS, AGENTS, EXPORTERS.**  
Advertising in this Journal.  
**NEW SOUTH WALES.**

### Sydney.

Chilton, F., City Fruit Markets.  
Greenberg, S. & M., Fruit Markets.  
Louey Pang & Samuel Wong Ltd.,  
Thomas St., Haymarket.  
Rule & Beavis, Fruit Exchange.

### VICTORIA.

### Melbourne.

Fred. J. Andrews, 416 Little Collins St., Melbourne.  
Clifford Barnsbee, 323 Bourke St., Melbourne.  
Producers' Dist. Society, Western Market.  
Cave F. & Co., Melbourne.  
H. G. Colombie, Temple Court, Little Collins St., Melbourne.  
Davis, J., Western Market.  
Dennys, Lascelles Ltd.  
Fruitgrowers' Depot, 471 Flinders Lane, Melbourne.  
Lister, G., Western Market.  
Mills, A. & Sons, Western Markets.  
Mills, J. B. & Co., Bank House, Bank Place, Melbourne.  
Mumford, J. G., 449 Flinders Lane.  
Pang & Co. Ltd., H. L. Little Bourke St.  
Ross, J. W., Western Market.  
Silbert, Sharp & Davies, Western Markets.  
Stott & Son, T., Western Markets.  
Tim Young & Co., Western Market.  
Vear, F. W., 49 William Street.  
Wade & Co., H. M., 471 Flinders Lane.  
Woolf & Western Market.  
Wholesale Fruit Merchants' Assn., J. D. Fraser, 325 Collins St., Melb.

### QUEENSLAND.

### Brisbane.

Barr, A. S., Fruit Exchange.  
Collard & Mackay, Fruit Exchange.  
Cooksley & Co., Fruit Exchange.  
Finlayson & Son, Fruit Exchange.  
Geeves, H. V., Fruit Exchange.  
Robsons Ltd., Fruit Exchange.  
W. J. Whitten & Co., Fruit Exchange.

### TASMANIA.

### Hobart.

Jones & Co. Ltd., H., Fruit Exporters.  
Peacock & Co., W. D., Fruit Exporters, and at London.

### Launceston.

Bender & Co. Pty. Ltd., 110 Elizabeth Street.

### NEW ZEALAND.

### Dunedin.

Co-operative Fruitgrowers' of Otago Ltd.  
Paterson, Thos., & Co., Vogel Street.  
Reilly's Central Produce Mart.

### ENGLAND.

### London.

Gerald Da Costa, Covent Garden.  
Margeson & Co. Ltd., Covent Garden.  
Monro Geo., Ltd., Covent Garden.  
T. J. Poupard Ltd., Covent Garden.  
Ridley, Houlding & Co., Covent Garden.  
Swann & Co., 3 Salter's Hall Court

### Liverpool.

Jas. Adam, Son & Co., Fruit Exchange.

### Edin.

White & Son Ltd

### Coventry.

Roswell Bros. & Davis.

### Manchester.

Manchester Ship Canal: Australasian Representative, Capt. W. J. Wade, 8 Bridge St., Sydney, N.S.W.

### GERMANY.

### Bremen.

Fruchthandel, Gesellschaft.

### Hamburg.

A. Heimer, P. H. & Son., Fruchthof.  
Lutten, J. H. & Co., Hamburg.  
Fruchthandel Gesellschaft, Fruchthof.  
Scher, Aug., Fruchthof, Reps. J. B. Mills & Co., Queen St., Melbourne.

## AMERICAN APPLES IN ENGLAND.

### Good Prices Realised.

Ottawa (13/9/26).

The following quotations, from the Canadian Fruit Trade Commissioner in England, have been issued by the Fruit Branch, Canadian Department of Agriculture.

**Southampton.**—U.S.A. Apples, boxes, Washington Jon. Ex. Fancy, 24/- fancy, 23/-; C. grade, 19/8; Oregon Gravensteins, fancy, 19/8 to 20/3; California Pears, boxes, Clairgeau, ex. fancy, 14/2 to 18/6; B. Hardy, ex. fancy, 24/- to 25/2; Virginia Apples, barrels, Bonum, No. 1, 39/4 to 56/9.

**Glasgow.**—U.S.A. Apples, barrels, Virginia York Imperial No. 1, 27/4 to 32/9; Gravenstein and Wealthy, 21/9 to 34/11; Jon., No. 1, 30/1 to 45/10; New York Pears, barrels, Bartlett, No. 1, 40/5 to 54/8; Clapp, No. 1, 32/9 to 43/9; Oregon Apples, Gravenstein, box, ex. fancy, 17/6 to 20/9; Washington Apples, box, Jonathan, ex. fancy, 19/8 to 23/-; fancy, 18/6 to 21/10; C. grade, 14/2 to 18/11.

**Amsterdam.**—American Apples, winter Banana, ex. fancy, boxes, 18/- to 18/11.

**London.**—California Apples, boxes, Gravenstein, fancy, 18/6.

## BRITISH MARKETS.

### Fruit Prices Improving.

Liverpool (8/9/26).

Messrs. J. C. Houghton and Co., 1 Temple Court, Liverpool, report a slight advance in American box Apples—Californian and Oregon Gravensteins, 12/- to 18/6. Pears are realising satisfactory results, Bartletts in barrels being well competed for. Boxes consisted chiefly of Beurre Hardy and Comice in perfect condition. Bartlett, barrel, 34/-, 50/-; B. Hardy, box, 19/, 21/6; Comice, box, 12/6, 14/-.

**American Peaches.**—Those arriving in sound condition have sold favorably, but some lots unfortunately landed defective. Crate, 16/-, 17/-; defective, 2/-, 5/-.

**Oranges.**—South African—values have again advanced quite substantially. Choice Navels, 96/126, 18/-, 22/-; 150/176, 24/6, 27/-; 200/288, 22/-, 28/-; choice seedlings, 96/126, 16/-,

20/-; 150/176, 24/-; 200/288, 20/-, 25/-.

**Grapes.**—Considering the prevalence of slight waste in many lots, and lack of maturity in others, rates paid can be accounted satisfactory. Almeria, best, 20/-, 28/6; others, 8/-, 17/-; Lisbon, white, 11/3, 17/6; black, 10/3, 13/9.

London (10/9/26).

Messrs. T. J. Poupard Ltd., Covent Garden (also Liverpool and Hull), report large quantities of Apples arriving from overseas, including Italy, Belgium, Holland, Spain, United States and Canada. Smaller supplies of Pears from France, Belgium and the U.S. have caused an improvement in value. All Citrus fruits are steady, South African Oranges and Grapefruit making higher prices. Prices, culinary Apples, 8/- to 16/- bushel; Worcester, finest, up to 26/-; Pears, 4/- to 8/- per half.

## EXPERIMENTAL SHIPMENT OF PINEAPPLES.

London (28/9/26).

The "Moreton Bay's" experimental shipment of Queensland Pineapples was only moderately successful. A considerable proportion was over-ripe, and some were decayed. It will be necessary to sort them before selling them. A few were in excellent condition, and salesmen expect they will fetch 4/- each. Experts consider the fruit is of the best quality yet received from Australia. It is unfortunate the condition is unsatisfactory, as the market is practically bare of Pineapples from the Azores.

## AUSTRALASIAN MARKETS.

### New South Wales.

Sydney (21/10/26).

Mr. F. Chilton, City Fruit Markets, reports:—

**Queensland Fruits.**—Bananas, 16/- to 32/- per case; Pines, smoothleaf, 16/- to 22/-; Tomatoes, 4/- to 14/- per half case; Cucumbers, 9/- to 18/- per bushel case.

**N.S.W. Fruits.**—Bananas, 16/- to 32/- per case; Lemons, 4/- to 8/- per bushel case; Oranges, 4/- to 10/-; Valencia, 7/- to 11/-; Navel, 10/- to 20/-; Mandarins, Emperor, 3/- to 15/-; eating Apples, Granny, 9/- to 18/-; Passions, 5/- to 20/- per half case; Loquats, 2/- to 8/-.

**Victorian Fruits.**—Apples, Yates, 6/- to 17/- per bushel case; Statesman, 6/- to 14/-; Pears, Jos., 12/- to 24/-.

**South Australian Fruits.**—Apples, R.B., 7/- to 16/- per bushel case;

Statesman, 6/- to 14/-; Rokewood, 6/- to 13/-.

Tasmanian Fruits—Apples, S.P.M., 6/- to 15/- per bushel case; F.C., 6/- to 12/-; C.P.M., 6/- to 16/-; Dem., 9/- to 17/-; S.T.P., 3/6 to 10/-.

Owing to lighter supplies of red Apples prices have advanced, but small and inferior Sturmers and Crabs are practically unsaleable. Pines and Navel Oranges are very scarce and realising high prices. A good demand exists for choice Tomatoes and Cucumbers.

#### Victoria.

Melbourne (21/10/26).

Quotations were as follow:—Per case—Apples, Jon., choice, 10/- to 14/-; other, 6/- to 8/-; cooking, 6/- to 10/- Bananas, standard, 16/- to 20/-; choice, 23/- to 27/-; special, 28/- to 30/-; Pines, 13/- to 15/-; Cucumbers, Queensland, 14/- to 20/-; Passion Fruit, 35/- to 40/-; Citrus Fruit, Navels, A quality, special, 11/- to 17/-; B grade, 10/- to 16/-; C grade, 7/- to 13/-; standard, 1/- lower; common Oranges, best Vic., 10/- to 14/-; N.S.W., 7/- to 11/-; Mandarins, A quality, special, 12/- to 15/-; dry and small, 4/- to 6/-; Lemons, 7/- to 9/-.

#### V.C.C.A. MARKET REPORT.

V.C.C.A. market representative reports as follows for the week ending October 22, 1926:—Light supplies of Navel Oranges and bright weather conditions helped the sale of Citrus fruits generally over the last few days. Many districts have consigned the last of their Navels and have started their Valencia's. There should be a good demand for these from now on. The market for Lemons has improved considerably. Common Oranges are also in good demand. Mandarins have practically finished, the few lines coming to hand are mostly dry. Those that are in any

way juicy are selling well. The inferior stuff is hard to dispose of at any price.

Prices.—Navel Oranges, A quality, special, 12/- to 18/-, few extra higher; B quality, special, 10/- to 16/-; C quality, special, 8/- to 14/-; standard, 1/- lower; Valencia's, A quality, good counts, 14/- to 17/-; B and C quality, from 2/- to 4/- lower; Common Oranges, N.S.W., 9/- to 13/-; Vic., 10/- to 14/-; Mandarins, few extra juicy, 12/- to 15/-; dry and small, almost unsaleable; Lemons, 7/- to 9/-.

#### Western Australia.

Perth (14/10/26).

Apples, Dunn's, dumps, to 22/9; Grannies, prime, dumps, 21/6 to 24/6; special, 26/-; Yates, prime, dumps, 19/- to 24/-; Rokewood, prime, dumps, 17/- to 20/-; Chandler's (few), prime, dumps, 16/- to 21/-; Oranges, Navels, 11/- to 17/-; special, to 21/9; flats, 8/- to 14/-; Valencia's (a few), 9/- to 14/-; flats, 8/- to 11/-; Mandarins, flats, 8/- to 12/-; some, 4/-; special, 17/-; Lemons, flats, 4/- to 10/9; Loquats, 7/- to 12/6; Passion Fruit, quarter cases, 7/6 to 14/9; Cape Gooseberries, 6½ to 8½ lb.

#### Queensland.

Brisbane (19/10/26).

Local Fruit—Lemons, prime, 5/- to 6/6; others, 2/6 to 3/- a quarter case; Pines, rough leaf, prime, 8/- to 12/-; others, 4/- to 7/- a dozen; smooth leaf, prime, 10/- to 14/-; others, 8/- to 9/6 a case; Passion Fruit, 12/- to 18/- half bushel case; Oranges, 3/- to 10/- a case; special, 11/- to 12/-; Navels, prime, 15/- to 20/-; others, 14/- to 15/- bushel case; Mandarins, 6/- to 14/-; specials, 6/- to 14/-; specials, 14/- to 20/-; Papaws, 1/6 to 6/-; Strawberries, 6/- to 12/- dozen boxes; Seville Oranges, 6/-;

Mangoes, 12/- to 13/- a bushel case; imported apples from other States—Sturmers, 5/- to 10/-; Rome Beauties, 7/- to 13/-; Statesman, 11/- to 15/-; Jonathans, 6/- to 15/-; Rokewoods, 11/- to 14/-.

#### Tasmania.

Hobart (10/10/26).

Apples, Delicious, best, 11/6 to 12/-; fair, 10/6; Democrats, 12/-; medium, 7/6 to 5/-; S.T.P., prime, 5/-; medium, 3/6 to 4/3, small and withered lots, 2/- to 3/-.

#### South Australia.

Adelaide (16/10/26).

Apples, Jon., 10/- per case; Cleos., 10/- per case; eating, 9/- to 11/-; cooking, 8/- to 10/-; Bananas, 34/- to 36/- per crate; Lemons, 5/- per case; Loquats, 10/- to 12/-; Oranges, 7/-; Navel, locals, 14/-; Navels, 14/-; Poorman, 5/- per case; Passion Fruit, 1/6 to 2/- per dozen. (Fruit prices are without cases.)

#### New Zealand.

Dunedin (9/10/26).

Messrs. Reilly's Central Produce Mart Ltd., Moray Place, Dunedin, report a large volume of business and good sales for all lines. The first consignment of Tomatoes realised 3/4. Prices.—Pears, choice desserts, 5½d.; cooking, 2½d.; Apples, Delicious, 5/- to 14/-; Sturmers, 4/6 to 10/6; Dougherty's, to 10/6; other desserts, to 7/6; Democrats, 7/- to 12/6; choice cookers, 6/- to 8/-; small inferior, 2/9; Lemons, choice Californians, 300/360's Festive brand, 36/-; Missions, 38/6; Oranges, Adelades, 20/-; Navels, wanted, 24/-; Bananas, ripe, 32/6; Pines, choice, 24/-; Raratongan Tomatoes, 15/-.

## FRUIT SHIPMENTS — TO NEW ZEALAND

### REILLY'S CENTRAL PRODUCE MART LTD., DUNEDIN

advise Growers of CHOICE FRUITS to ship to Dunedin

**REILLY'S** anticipate a keen demand for all lines of choice Fruit arriving on this market between the months of July and December.

**REILLY'S** offer Fruitgrowers their faithful service and will be pleased to advise Fruit Shippers the probable prices available and prospects of making suitable sales.

Cable or write to **Reilly's, Dunedin.** Codes used—BENTLEY'S, MARCONI'S, WESTERN UNION, A B C 5th & 6th Ed.

**REILLY'S GUARANTEE FAITHFUL SERVICE TO ALL CONSIGNORS.**



# The Canning Industry

## Effect of the Sugar Burden

Here is a statement of the position as set forth by the Senior Director of a co-operative cannery:—

The conditions surrounding the industry are much the same as last year. We are told on the one hand that the industry should stand on its own feet, while on the other hand, one interference after another has robbed the grower of the possibility of choosing the course he knows to be best. There is no more sturdy, self-reliant, long-suffering class of person than the pioneer fruitgrower, no one more used to standing up against very heavy odds than he. Every blight known to nature comes his way. He has also had to fight his way in the face of the world's competition, yet he has only asked the right to fight with his hands unfettered with restrictions which his competitor has not got to contend with. Yet has he that right and opportunity?

Many of the goods he uses, such as cases and oil, have to be brought from the country of his competitor, with both freight and customs duty to pay. As if these were not sufficient, the greatest and most necessary commodity he uses, sugar, the obtaining of which at world's parity is absolutely essential to his progress, is denied him, and in its place a network of conditions and restrictions which raise the price of his goods in tinned form to a level that very seriously restricts their sale.

So much so is this true, that jam manufacturers have offered a bonus equal to twice the amount of the Government bonus if the Government will have the moral backbone to lift the iniquitous sugar burden from the backs of the growers. Such offer from responsible people speaks for itself.

Just think what this meant, expressed in terms of money per ton of fruit—just that difference between the present bare cost of production—even this is disputed—and a price which would make the growers again what they were before the sugar imposition was laid upon them, a people with a progressive future. Such bounty as if given in certain varieties, would be of greater benefit if canners were informed sufficiently in advance of the season to make their arrangements. We have had four Ministers in charge of marketing arrangements during the past few years, and decisions have always been

late. This has led to markets being missed, and the possibility of that bugbear of all business, a carry-over.

It has been stated in support of the sugar burden that it is peopling the north, and thus helping Australia in her defence. But is this so? Already the comparatively small area planted with sugar, a mere speck or dot when we look at the map, has produced more sugar than Australia can consume, so we may well ask how this small area is to affect the defence. The true defence would undoubtedly be to put the fruit industry on a payable export basis, which in turn would put ten times more population in Australia than the sugar industry, with its limited Australian sales, ever can do.

### Ship Your Oranges, Lemons, Grapes to New Zealand



All consignments for  
this market will have  
careful attention and  
realize highest prices  
if sent to

#### The Co-operative Fruitgrowers of Otago Limited, Dunedin

Personal supervision of  
every consignment.

Cheques posted promptly.

Drop us a Line or Cable  
"Peachbloom," Dunedin.

### CANNING FRUITS.

#### Additional Government Plantings.

A letter sent to the Chairman of the State Rivers and Water Supply Commission (Mr. W. Cattanaach), in accordance with a resolution of the Victorian Fruit Council, asking for a full investigation of the position of the fruit canning industry before further Government financed plantings were undertaken, has elicited the following reply:—

"No extensive plantings of canning fruits are being contemplated in the

irrigation districts by this Commission. Applications have been received for the establishment of very limited area orchards in North Shepparton, but even if all applications were granted they would amount to less than 1 per cent. of the total orchard area in the Goulburn Valley. In regard to these applications, it is only proposed to grant them if, after investigation, it is found it would be advantageous to the applicants.

"The Commission is fully alive to the necessity of protecting, not only old established growers, but also new applicant growers, and it will certainly not do anything that will jeopardise the interests of either section."

The Minister for Agriculture (Col. M. W. J. Bourchier), in reply to a similar request, states that the matter will receive the careful and serious consideration of the Government.

### CANNED FRUIT CAMPAIGN.

Mr. F. W. Moore, the representative of the Australian Fruit Canners' Association on the Australian Trade Publicity Committee in London, which is launching a £50,000 advertising campaign to popularise Australian goods, stated recently that according to report the Californian packers were contemplating a million dollar campaign in Great Britain. Australia's young industry as yet sent only about 200,000 cases of canned fruits a year to this country. They were of the highest quality, specially graded for export; yet California, with an annual surplus of 4,000,000 cases, could afford to dump in Great Britain at considerably less than the American market prices."—"The Fruitgrower" (England).

### CANNED FRUITS.

#### Export Control Board.

The Minister for Markets and Migration (Mr. Paterson) announced on October 1, that regulations had been issued under the Canned Fruits Export Control Act 1926, providing for the preparation of rolls to be used in connection with the poll and election of members to the Canned Fruits Export Control Board, which will be held shortly.

All canners who produced not less than 10,000 dozen 30 oz. tins, or its equivalent, of Apricots, Clingstone Peaches, and Pears during the 1925-26 season are eligible to vote at the poll and the election.

Claim forms for enrolment have been forwarded to those canners whom it is known are entitled to vote. The canneries interested are situated in New South Wales, Victoria, South Australia, and Tasmania.

#### 12,000,000 CANS FROM CO-OPERATIVE CANNERIES.

The co-operative canneries at Shepparton, Kyabram and Ardmona, in the Goulburn Valley, Victoria, had a combined output of 12,000,000 cans last season. This is stated to be about half the Commonwealth output.

#### THE CANNED FRUIT INDUSTRY.

##### Appeal for Assistance.

A deputation of orchardists waited on the Premier of Victoria (Mr. Allan) during September, asking that, in view of the fact that the Commonwealth Ministry were only prepared to help the industry for a limited time, what assistance was the States Government prepared to give? The more they produced the greater their loss. An enquiry into the whole fruit position should be made.

The Premier promised to refer the matters to Cabinet.

One member declared it impossible to carry on unless the bounty was sufficient to give the growers £12 a ton.

##### Cost of Production.

Mr. Churches said that the cost of producing a ton of Apricots was £18 to £20 a ton, but the best selling price had been £10.

The Chairman of the Water Commission (Mr. Cattanaach), commenting on the statements by deputationists, said growers should pull together; there were too many organisations. Continuity of supply would give them better markets abroad. A big market could be developed in the East. It was possible for local sales to be increased. He did not take a pessimistic view of the industry.

#### CANNED FRUIT EXPORTS.

The Minister for Markets and Migration (Mr. Paterson) recently gave some interesting figures regarding the export trade.

"During the year 1924-25," he said, "Great Britain received 728,525 dozen 30 oz. tins of canned fruits from Australia, and during the year now drawing to a close the total exports to the United Kingdom from Australia would be about 500,000 dozen."

## New Zealand.

Bud Selection : Pest Control

#### NEW ZEALAND INSTITUTE OF HORTICULTURE.

##### Valuable Work in Bud Selection.

AT the Fourth Annual Meeting of the N.Z. Institute of Horticulture, held at Wellington, on August 18, the reports presented indicated that much valuable work has been accomplished. Schools of Agriculture and Horticulture are being established, and popular lectures and instruction on horticultural matters take place in many centres. A comprehensive scheme of horticultural education has been initiated.

The matters of most interest to fruitgrowers are the findings of the Fruit Varieties Conference and the

cut and supplied to the Citrus nurseries, and preparations are in hand for carrying on the work during the coming season. It is felt that with proper selection the future of a great Citrus industry is in the hands of the growers.

##### Apricot Selection Committee.

The Selection Committee of the Teviot Fruit Growers' Association has in co-operation with the Association of Nurserymen again selected some 6,000 Apricot buds as well as a good many Plums and Peaches. These were carefully cut, labelled and despatched to the Stone Fruit Tree Nurserymen of Canterbury, Marlborough, and all parts of the North Island.

Growers, after some six years' experience are finding that it counts a great deal to be able to rely on the trees required both as to name and as to the type. This has been made possible in the case of the Apricot by the Growers' Committee selecting the type and the trees that conform to the type most desired and arranging that only these shall be used as the parents for future trees.

The same system of selection will soon have to be undertaken for every class of fruit.

The best thanks of all concerned are due to the Selection Committee for their voluntary work, and to those who have the approved types of fruits for the free gift of the selected buds. The actual work of cutting and the dispatching is done by the Association of nurserymen, and the out-of-hand expenses are met by the nurserymen using the buds.

##### PEAR-MIDGE PARASITES.

The New Zealand Department of Agriculture has made arrangements for further supplies of platygaster parasites of the Pear-midge (*Perisira pyri*) to be collected in Europe and shipped to New Zealand. The first and second consignments of these have now arrived, says the "Journal of Agriculture," and are being held in cool storage until the midge become active. Several other consignments are also on the way.

From this material, and from that being reared in the insectary cage at Henderson from the consignments secured last year, it is expected that sufficient parasites will be on hand this season for establishing in the Pear-midge-infected areas.

## T. J. POUPART Ltd.

Covent Garden, London, W.C.2  
and 3 Love Lane, Eastcheap, E.C.2

The Premier Firm of Fruit  
Salesmen in Great Britain

Sale by Private Treaty only (Gives best results)

Commission the exclusive basis (purchase propositions cannot be considered)

Advances offered to cover freight and accessory charges

Victorian Representative:

**FRED. J. ANDREW**

416 Little Collins Street, Melbourne

work in plant improvement undertaken by the Citrus Improvement and Apricot Selection Committees. Their reports are summarised herewith.

##### Citrus Improvement.

The Island Orange selected seedlings and selected seedlings of Citronella were recommended for use.

Messrs. C. H. Scott (Citrus Association), G. A. Green (Nurserymen's Association), and W. H. Rice (Orchard Instructor), were appointed a standing Committee on bud selection; nurserymen advised they were willing to use selected buds if supplied to them.

##### Work in Progress.

In all the leading Citrus orchards, the best trees were marked for future observation. Several thousands of Lemon and Orange buds have been



(Continued from Page 547)

big crop in the Rhone and Loire Valleys, the principal commercial Pear districts, but with a light crop in the vicinity of Paris. It is further stated that Belgium, Holland, and Germany give promise of an abundant Pear crop, while Czechoslovakia is expected to have better than a half crop, with average yields in Switzerland and the Italian Tyrol. It should be remembered that France and Belgium are the principal outside sources for Pears reaching the British Markets, the United States ranking third. Dutch Pears also reach England in volume, but find a ready outlet in German industrial areas. Pears from Czechoslovakia have the greatest influence on the German and Scandinavian demands.

#### "YARRA" SPRAY MATERIALS.

The manufacturers of "Yarra" brand spray materials are also preparing spray spreader, in addition to other fruit sprays, advertised elsewhere in this issue. A discount of 5 per cent. is allowed on prices quoted, if delivery of goods is taken from their factory.

#### PROBLEMS OF FRUIT TRANSPORT.

##### Uniform Temperatures in Ships' Holds Imperative.

##### Views of Dr. Kidd.

"The question of uniformity of temperature in large holds carrying fruit is one of great importance," said Dr. Franklin Kidd, in the course of a paper entitled, "The Efficient Transport of Fruit," read at the Royal Sanitary Institute Conference during July, says the "Imperial Food Journal."

"The differences in temperature in different parts of the same hold are often astonishingly large as things are at present," he continued. "In the transport of very quickly perishable produce there may not be much margin of safety, and in such a case it would necessarily follow that while transport in one position in the hold would be successful, the same produce in another and warmer spot would be spoiled. The efficiency, scope, and reliability of transport facilities under controlled temperature conditions depend to an extent, which is not yet sufficiently realised, upon uniformity

of cargo temperature throughout the chamber.

"There is also another reason why uniformity of temperature is desirable. Air movement from a warmer part of the cargo to a colder part must often result in the condensation of water upon fruit in the colder area. Any such condensation of water is highly undesirable."

##### Wastage by Fungal Rotting.

Further on in his paper, Dr. Kidd said: "Wastage of fruit during transport and storage by fungal rotting is probably often initiated by the condensation of water upon the surface of the material. The spores of fungal rot organisms are always present in great numbers on the surface of fruits. If free water is available, these spores are able to germinate and produce an actively growing fungus which penetrates and kills the fruit. The conditions which must be avoided then are those which may result in the condensation of water, to a microscopic extent, upon the surface of fruits. Such condensation can only occur as the result of the impact of warmer moisture-laden air upon cooler surfaces. The difference of temperature sufficient may be extremely small if the air is saturated or nearly so."

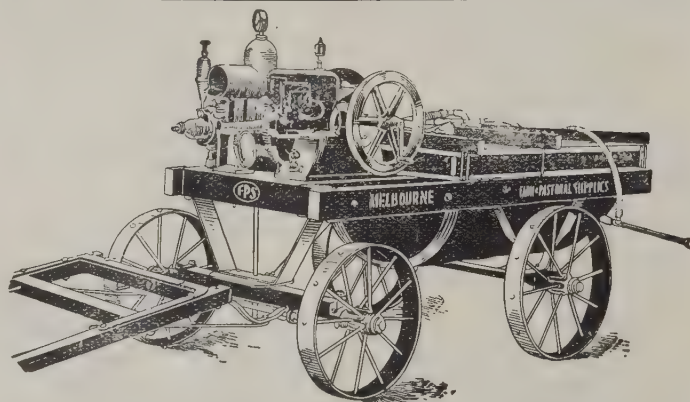
[Australian fruitgrowers are glad that Dr. Kidd is shortly coming to Australia, accompanied by Mr. A. J. Smith, M.A., to study fruit problems. —Ed. "F.W."]

#### FOR SALE.

##### ORCHARD AT SOMERVILLE.—

Victoria's easiest fruit growing district. Rainfall, 32 inches. Finest young orchard—30 acres; 17 planted—10 acres 10 years; 2 acres, 5 years; balance, 2 years. 800 Jonathan, 400 Delicious, 200 Democrat, 50 each Morgan, Granny, Yates; man's room. Wonderful chance. £1,250, half cash, balance 7 per cent. Owner, S. S. GAULT, Somerville.

## THE NEW HERCULES SPRAYER



Two guns at full 300 lbs. pressure—this is the achievement of the New HERCULES Sprayer, which consists of a 1½, 2½, or 3½ B.H.P. HERCULES Engine geared direct to a Metters' Power Pump.

If you have a Power Sprayer already, let us quote you for fitting our engine or pump, or both.

Write at once for particulars, or apply for a FREE DEMONSTRATION in your own Orchard.

**THE FARM & PASTORAL SUPPLIES**  
PTY. LTD.  
Machinery Merchants,  
500 BOURKE STREET, MELBOURNE

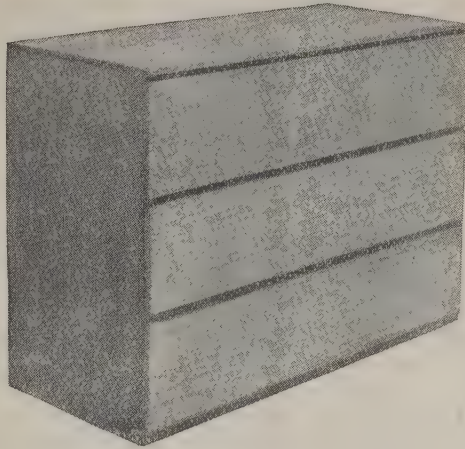
## FRUIT TREES

CLEAN, HEALTHY,  
.. WELL-GROWN ..

All the Leading Varieties  
Correspondence Invited

**J. W. LAWREY**

Kinglake Nurseries YARRA GLEN, Vic.



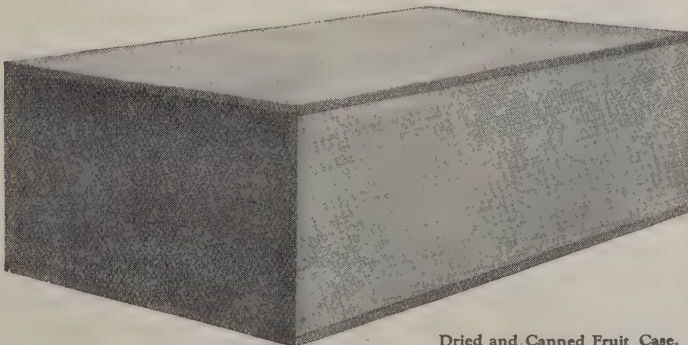
Australian Apple and Citrus Dump Bushel Case.

## SOME ADVANTAGES IN FAVOR OF IMPORTED CASES

- (1) Full drawback of duty allowed on all cases exported.
- (2) 1/3rd less freight than on Hardwood cases.
- (3) 25% rebate on rail freight for full trucks.
- (4) All timber cut to exact sizes making it an easy matter to assemble a symmetrical case.
- (5) Every piece of timber fit and ready for use, thereby eliminating waste.
- (6) Can be supplied in shooks or made up and branded.

Particulars from the Largest Importers

# Overseas & Interstate Trading Co. Ltd.



Dried and Canned Fruit Case.

## SOFTWOOD CASES

(IMPORTED)

*Cheaper than hardwood if exported.*

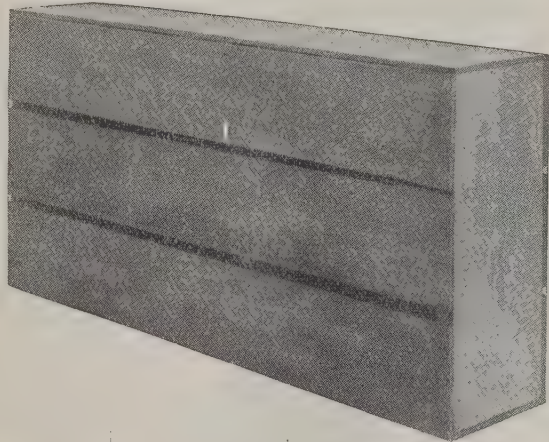
*Cut to Australian Standard Sizes*

DUMP BUSHEL with one piece top and three equal piece side

UPRIGHT BUSHEL with one piece top and three equal piece side

DRIED FRUIT CASE with one piece side and two equal pieces tops and bottoms

CANNED FRUIT with one piece side and two piece tops and bottoms



Upright Bushel Case with Centre Partition.

22 Market Street,  
Melbourne

---

Phone Central 9110

---

Also  
King William Street,  
ADELAIDE



## NOW is the time to do your Spraying

A good spraying now before the hot days have hatched out the eggs of the various Insects in your Trees will do more good than a dozen sprayings later in the year. We can supply the Pumps and the Spraying Mixture.

### Auto-Spray No. 5

The "Auto-Spray" No. 5 is made entirely of Brass, doing away with all danger of corrosion. Can be used in barrel or bucket with length of hose, or carried on operator's back in a knapsack. 2½ ft. of ½ hose supplied with each Pump. Price (complete with knapsack), \$5/-.



### "Sans Rival" Spray Pump

The "Sans Rival" is a simple, solid, and practical little Spray Pump. Contains 3½ gallons. Supplied with 2½ feet of hose, 2 Nozzles, Brass Extension, and Strainer, Copper Tank. Price, £4/5/-.



### Auto-Spray No. 1

The "AUTO-SPRAY No. 1" is a portable Spray, 24in. high, 7in. in diam. Capacity, 3½ gallons. Weight (when empty), 9 lbs. It is guaranteed to be mechanically perfect, and to give satisfaction in every way. The entire machine is made without screws or bolts, and can be taken apart without the use of any tools. The Valves and Washers resist oil and other solutions that attack rubber. Price, complete, 55/-.

We show all types of Pumps for Irrigation, Home Use, Hand or Power, in our New Illustrated and Priced Catalogue, which will be sent you Post Free on Request.



**McPherson's**  
Proprietary Limited

582-592  
Collins St.

Melbourne

## WISKEMANN SMITH & CO. LTD.

Specialists in

**NICOTINE 95/98%**

**NICOTINE SULPHATE 40%**

Strength and Quality Guaranteed  
at Competitive Prices

also

**POTASH (Industrial & Fertilizing)**

Invite enquiries from responsible  
houses in every State in Australia  
also New Zealand with a view to  
Sole Representation

CABLE NOW FOR PRICES

Telegraphic Address :

**WISKEMANN, LONDON**  
Wool Exchange, London, E.C.2, England

## FRUIT GROWERS!

Avoid bruising of your fruit in transit  
by using the

## "AIR FREE" CASE

Patent 9331/22

which surpasses any other case for  
use in Cool Stores, or Transport  
of Fruit to Local, Interstate and  
Overseas Markets

Orders now being received for 1927  
Export Season

Full particulars from

**F. Cave & Co. Pty. Ltd.**

Wholesale Fruit Merchants & Exporters

Western Market, Melbourne

Cable & Telegraphic Address : "Cavecofruit," Melbourne  
Telephone : F 3930

## MURIATE OF POTASH FOR ORANGES.

### Heavier Dressings Profitable.

For several years trials designed to ascertain whether heavier dressings of muriate of potash than are customary, could be proved profitable, have been carried out by Mr. F. J. Olorenshaw, of Renmark, S.A.

Conducted on orchard-scale (that is to say on large areas, and not on merely a row or two of trees), the trials have convinced Mr. Olorenshaw that "extra potash" is very profitable.

These are the latest ascertained results:—Area treated with bone super (4 cwt. per acre) and 1½ cwt. muriate of potash per acre: Average yield per tree, 6 cases. Area treated with bone super (4 cwt. per acre) and 2½ cwt. muriate of potash per acre: Average yield per tree, 8 1-5 cases.

The cost of the "extra potash" worked out at between 2½d. and 3d. per tree, and taking the value of the Oranges at the conservative value of 6/- per case, the net profit per tree resulting from the use of "extra muriate" amounted approximately to 13/-.

On acre scale, the profit from the additional two and one-fifth cases would approximate £40, and it will be noted that the area treated with only 1½ cwt. muriate per acre, carried a good crop.

The crop now being harvested will also be compared in the same way, but Mr. Olorenshaw is aiming at an average per tree production somewhere in the neighborhood of ten cases, and his trees certainly look capable of reaching that figure.

Mr. Olorenshaw's use of muriate of potash extends back for 20 years, and his results and observations have done much to discredit the old and fallacious theory that the sulphate base is in any way preferable for the production of large crops of high-quality fruit.

There is matter for consideration in these results for fruitgrowers generally. It does not, of course, follow that "extra potash" dressings would give correspondingly higher yields everywhere. But it would seem well worth the while of growers to ascertain individually whether or not that little additional return per tree, which makes so much difference taken over the orchard as a whole, is not at present escaping them.

In the ever-rising cost of production, one form of labor—that of the tree itself—has not risen, and if a little more of this or that fertiliser

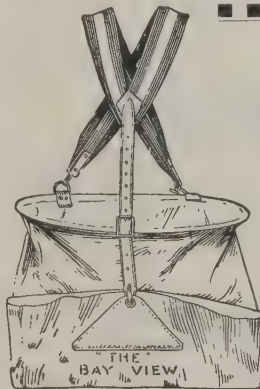
can encourage it to still greater efforts—is not the search for the facts worth while?

## PILGRIM FOREFATHERS INSTITUTE CO-OPERATION.

Co-operation has been an American institution since the dawn of its beginning, states the Californian "Citrograph." When the Pilgrims came over on the "Mayflower," they drew up a contract and agreement in which they consented to pool all of their resources for seven years after landing. They adopted the one-man one-vote policy, which is a fundamental of successful co-operatives to-day.

Through the troublesome days that followed, the colony was preserved largely because of mutual helpfulness and support—in other words, through co-operation.

Co-operation is not so new, after all.



## "Bay View" Fruit Picking Bag

CAN BE USED FOR ANY CLASS OF FRUIT

Allows use of Both Hands in Picking.

No Bruising of Fruit.

Weight Carried on Shoulders instead of Back of Neck.

MR. J. LANG, President of the Australian Conference of Fruitgrowers, writes:—"After two season's use, I am well pleased with Bags; fruit receives the minimum of handling, and is less liable to damage. They are also a great time saver."

Price 12/6 each

Postage extra, one bag, 1/-; two, 1/9

F. R. MELLOR, 440 Elizabeth St., MELB.

## SUPPORT CO-OPERATION

By Consigning your  
FRUIT to the

## Producers' Distributing Society Ltd.

(Late Coastal Farmers' Co-operative  
Society Ltd.)

—Agents for—

"BLACK LEAF 40"

and all Orchard Requirements

Melbourne Sydney  
Newcastle Hobart  
Launceston Devonport

ESTABLISHED 1891

## AUG. STIER FRUIT BROKER, Fruchhof, HAMBURG

Telegraphic Address: FRUTERO, Hamburg.  
Consignments Solicited

Agents for Victoria and South Australia:—

J. B. MILLS & CO., Bank House, Bank Place  
MELBOURNE

Tasmanian Representatives:

SILBERT SHARP & DAVIES  
Clyde Street, Hobart, Tasmania



**LIQUID MANURE.**

**Splendid for the Vegetable Patch  
and the Home Garden.**

**Method of Preparation.**

The use of liquid manure is of special importance in gardens, especially the section devoted to vegetable growing, and every gardener should know how to prepare and apply it. A natural and very effective liquid manure consists of the draining of cattle sheds, stables, dung heaps, etc. Such drainings should, however, be diluted, according to strength, before application, writes the N.S.W. Department of Agriculture.

Liquid manure has special advantages in relation to garden crops, its stimulating effect on which is very noticeable, the fertilising ingredients of manure in a liquid form being more readily available to the plant. Manure in a solid state can be applied to the soil before the seeds are sown or seedlings planted, but subsequently it cannot be dug into the soil without some interference with the roots of the growing crop, even in the case of well-established plants. It is partly on this account that liquid manure is so valuable.

On pot plants and flower beds

liquid manure has very beneficial effects. The solid manure originally applied to the soil gets in time exhausted by the growing plant, and it is at this stage that more nourishment is required, the soil becoming poor and incapable of maintaining the plant in a healthy and vigorous state. Liquid manure, which is easily applied, comes to the rescue and remedies the defect. In short, all flower plants, vegetable crops of a quick-growing nature, and pot-plants of all kinds require treatment with liquid manure to ensure the best results.

To make liquid manure, soak a sugar bag of fresh poultry, cow, or pig manure for a week in a cask with the head knocked in—one holding 40 to 50 gallons is the most handy. Use the resulting solution at the rate of one part to three parts of fresh water. Fill the cask again, and when the

manure has soaked for a week use the solution at the rate of one part to one part of fresh water. The cask may then be filled up a third time, and after the liquid has been allowed to stand for a week it may be used neat. This form of liquid manure is safe, and if it is applied weekly at the rate of four gallons to every 18 feet of a running row, no further stimulant is necessary for most growing crops.

Many crops, such as Lettuce, Cabbage, and Silver Beet, will be more tender for being forced by applications of liquid manure.

Do not apply liquid manure to plants if the soil is at all dry. Dry soil should first be watered.

"As the yellow gold is tried in the fire, so the faith of friendship must be seen in adversity."—Ovid.

**Angels With Whiskers.**

"Mother," said little Willie, reflectively; "do men ever go to heaven?"

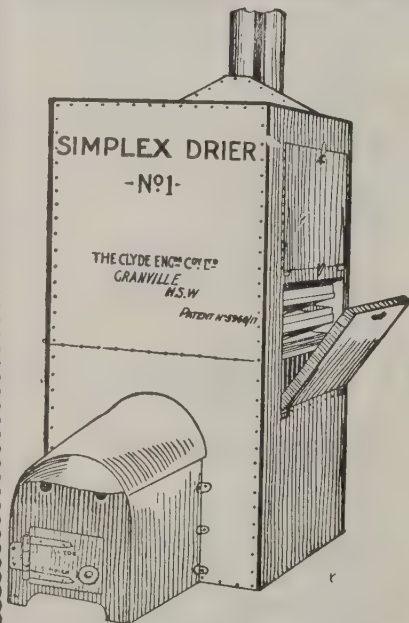
"Er, I think so, but dear, why do you ask?"

"Because I never see any pictures of angels with whiskers."

"Well," said the mother, thinking hard, "some men do go to heaven, but they only get there by a close shave."



GIBBS, BRIGHT & CO.—See Page XIV



# The Clyde Simplex Driers

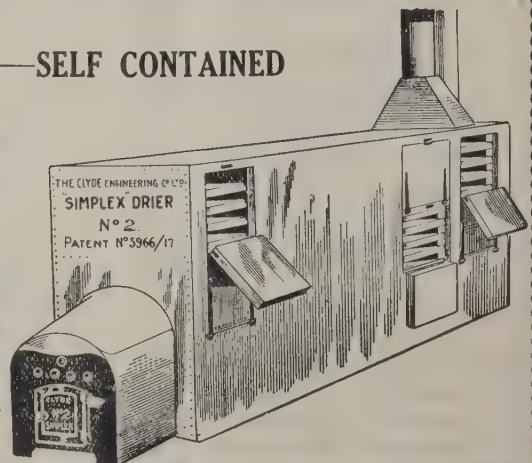
**For Drying  
Fruit, Vegetables and other Products**

**NO MORE WASTE FRUIT OR VEGETABLES**

**SIMPLE — SELF CONTAINED**

Made in Sizes to suit

Householders  
Small Orchardists  
OR  
Large Factories



**The Clyde Engineering Co. Ltd.  
GRANVILLE, N.S.W.**

## PEANUTS FOR PROFIT.

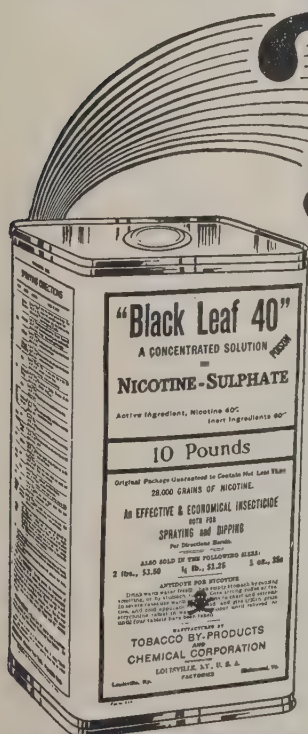
That Peanuts may be made a profitable sideline for the orchardist is the opinion of Mr. J. T. Claringbull, of Red Cliffs, who states he has received a yield of approximately 200 per cent. from four acres of Peanuts planted two years ago.

Writing in the "Sunraysia Daily" recently, Mr. Claringbull advised

that Hong Kong and Shanghai were the varieties best suited for our climatic conditions. Far better results are obtained by planting the kernels than nuts in the shell. When planting, sow about six inches apart; if a light dressing of agricultural lime is given prior to sowing it will be found most beneficial. The nuts are formed by the flowers burying themselves in the fine tilth, hence it is most im-

portant when the petals begin to fall, to earth the plants up in the same manner as you would Potatoes. In addition to a couple of cultivations this is all the attention the plants require. Seeds should be sown about the end of September, they will then be ready to harvest about April (when the fruit season is practically finished).

When harvesting, a furrow should be run, about six inches from the row of plants and then the plants are lifted by means of a large fork. The plants when dug should be left with the nuts uppermost for at least 48 hours to enable them to dry. Next shake the nuts into dip-tins, wash them in your cold-dip tanks, and spread on hessians on the racks. They will be ready to bag in six or seven days. Best results are obtained in light, sandy soils. Avoid clayey soils. A good average crop yields 18 cwt. per acre, in rows four feet apart.



**Why**  
be satisfied  
with dwarfs  
and culls

Protect your fruit and rid your orchard and garden of Aphis and similar destructive insects at a cost of only a few cents a tree. "Black Leaf 40," the "Old Reliable" nicotine spray, is recommended by Agricultural Colleges and Experiment Stations. Spray singly or in combination with solutions for scale, codlin moth and other orchard pests.

Sold by leading Australian and New Zealand Dealers

Tobacco By-Products and Chemical Corp.  
Incorporated

Louisville, Ky., U. S. A.

**Kills  
Aphis**

**"Black Leaf 40"**  
40% Nicotine

For Promptness, Reliability  
and Careful Attention

CONSIGN YOUR FRUIT TO

**RULE & BEAVIS**

FRUIT EXCHANGE,  
SYDNEY, N.S.W.

A TRIAL SOLICITED.

Shipping Number, 80.

Estab. 1888

**Latham  
Dehydrators**

"STAND ALONE"

The "Rolls Royce" of the Artificial Drying  
World.

Particulars, Prices, and list of present  
users on application

**D. J. LATHAM**

157 Queen Street,

Melbourne, Australia

**- LEMONS -**

We are the largest Buyers  
in Australasia

C. M. BROOKE & SONS  
73 Whiteman St., South Melbourne, Vic.



## CO-OPERATIVE COMPETITION.

## Wide Controls and Monopolies Not Desired.

## Important Statement by Hon. Herbert Hoover.

"THAT two or more co-operatives should market a given farm commodity—such as citrus products—rather than centralise the marketing in the hands of a dictatorial monopoly, is the candid and well founded opinion of serious students of economics," writes Bruce McDaniel in "Citrus Leaves" (California) for July.

Competition between co-operatives handling the same commodity is essential before the grower can hope to realise on the fair value of his crops. There is a wide difference between constructive and destructive competition, and the competition now existing in the California citrus in-

dustry is of the type that brings bigger and better returns to the producer. Without competition, the grower soon finds himself helplessly turning right and left for aid when the monopoly becomes arrogant, selfish, wasteful and inefficient. With at least two alert, fair, honest competing marketing organisations in the field, the grower is able to choose the body that does the particular job—merchandising—best.

In a recent article, Hon. Herbert Hoover, Secretary of Commerce, and the outstanding figure in the present economic life of U.S.A., laid stress upon the value and necessity of vital competition as well as the great good which has followed in the wake of co-operative effort. He said in part, "I could point out a thousand accomplishments during the past five years of co-operation, serviceable not only to themselves but to the public. The whole process of eliminating waste through standardising of dimensions,

qualities of goods and business practice, is only possible by such co-operation. There are to-day literally thousands of such co-operative movements in progress. They were almost unknown a quarter of a century ago. I am one who believes strongly that full constructive competition must be preserved in the manufacture and distribution of commodities. The virility and strength of our whole economic system springs from spontaneous enterprise and the stimulation of competition. It is the impulse of invention and improvement.

But competition does not necessarily imply destructive competition. It does imply that we must maintain a sufficient number of independent units in any given industry to assure us that the fundamental competition is sustained.

Obviously we do not want units so big or controls so wide that they become a menace to the public or des-

## ANOTHER PEST ELIMINATED

No present day Orchardist expects to keep his fruit trees alive and in full bearing unless he can keep down, by spraying with poisonous liquids, the thousand and one insect pests, fungoid growths, and other similar evils to which his trees are always subject.

Just as your trees are attacked, so is all your steel and ironwork, which forms the largest part of tools and implements you buy.

The cancer of rust will eat all your plant unless it is **ZINC SPRAYED BY THE SCHOOP METAL SPRAY PROCESS.**

No zinc sprayed article exposed to atmospheric conditions has ever rusted.

When ordering Refrigerator Coils, Tanks, Dryers, Spraying Outfits, specify all steel work to be metal sprayed.

Fruit juice containers, expressing machines, and other apparatus used in manufacture of foodstuffs can be tin sprayed.

Ask for booklets and other information from

## ALUMINO-THERMIC & METAL SPRAYERS LTD.

Union House, 247 George Street, Sydney

Tel. BW 6467.

Box 219D G.P.O.

## Corkscrew Steel Fencing Posts

All previous defects associated with Iron Posts eliminated

### FIREPROOF. WHITE ANT PROOF.

Owing to the corkscrew construction of these Posts, they have a tremendous grip in the ground, and it is only necessary to drive them in 16 inches, in practically any kind of soil. We suggest using about a 5lb. hammer for the purpose. The Posts are bored to specification without extra charge. It is necessary to use the ordinary wooden strainers.

### THE MAIN FEATURES ARE:

**PERMANENCY.**—The Posts will last a lifetime, and will also ensure the Wire lasting a similar period.

**INDESTRUCTIBILITY.**—The Posts are unbreakable, and their flexibility and resiliency enable the fence to maintain its true position, even after being subjected to pressure. The fact that a single post will bend when not in the fence is not a detriment, but we claim it to be one of its greatest merits, as any other iron or steel post of somewhat similar size is liable to fracture when subjected to pressure, which is impossible with the Corkscrew Post. This Post when bent can just as easily be straightened again without injury to the post.

Obtainable from—

Sole Agents for  
N.S.W.—

The Commonwealth Wool & Produce Co. Ltd.

### CHEAPNESS OF RAIL TRANSPORT AND HAULAGE CHARGES.

The Posts are carried at the same rate as fencing wire on the railways, viz.: 2 tons or over, "A" Rate; 1 ton, "B" Rate; under 1 ton, 1st class. For a distance of, say, 300 miles, the rates would be:—

|                 |         |         |
|-----------------|---------|---------|
| "A" .....       | £2 7 6  | per ton |
| "B" .....       | £3 7 6  | "       |
| 1st Class ..... | £6 14 2 | "       |

At "A" Rate the cost per post would be approximately 1d. for the above distance. These posts can be despatched with wire netting and fencing wire to make up minimum quantities to save freight.

### CHEAPNESS AND QUICKNESS OF ERECTION.

The saving in this item will be found to be enormous.

### PRICES AND WEIGHTS:

5 feet, about 4½lbs. (500 to ton), 1/6 each. 5 feet 6 inches, about 5 lbs. (450 to ton), 1/7½ each. F.O.R., Sydney. Longer Posts can also be supplied.

Station Supplies Department (1st Floor)  
3 Bent Street, SYDNEY

troy individual initiative or equality of opportunities. The real question, after all, with regard to a unit, is whether it is subjected to effective competition, not the size of it. What we sorely need is thoughtful consideration directed to the essential question of how to maintain real competition instead of legalistic formulae, how to substitute constructive competition for destructive competition. The whole process of combination should be weighed solely in the scales of public interest."

He rushed into the police station, breathless with hurry and excitement. "They say you've caught the man who broke into my house the night before last," he gasped.

"Yes," answered the sergeant. "Do you want to see him?"

"Rather," said the other. "I want him to tell me how he managed to get into the house without waking my wife. I've been trying to do that for the last ten years."

### CALIFORNIAN FRUITGROWERS' EXCHANGE.

£14,047,302 Returned to Growers Last Season.

The Californian Fruitgrowers' Exchange, one of the most successful co-operative marketing organisations in the world, celebrated its 33rd anniversary this year. On April 4, 1893, says the "Sunkist Courier," a convention of growers assembled in Los Angeles, their declared purpose being—"To provide for the marketing of all Citrus fruits at the lowest cost under uniform methods, and in a manner to secure to each grower a certain marketing of his fruit and the full average price to be obtained in the market for the entire season." The California Fruit Growers' Exchange is the result of that meeting.

To-day 11,000 Citrus growers are members of the Exchange, which handled 75.4 per cent. of the total crop last season and returned to California £14,047,302. During the last 22 years returns to Exchange shippers amounted to £133,200,000, the credit losses during the whole period were 44/10,000 of 1 per cent. of the f.o.b. returns.

Through their Traffic Department 14,729 freight claims, aggregating £75,050 were collected during the past season. This is a part of the regular service with no additional cost to the grower.

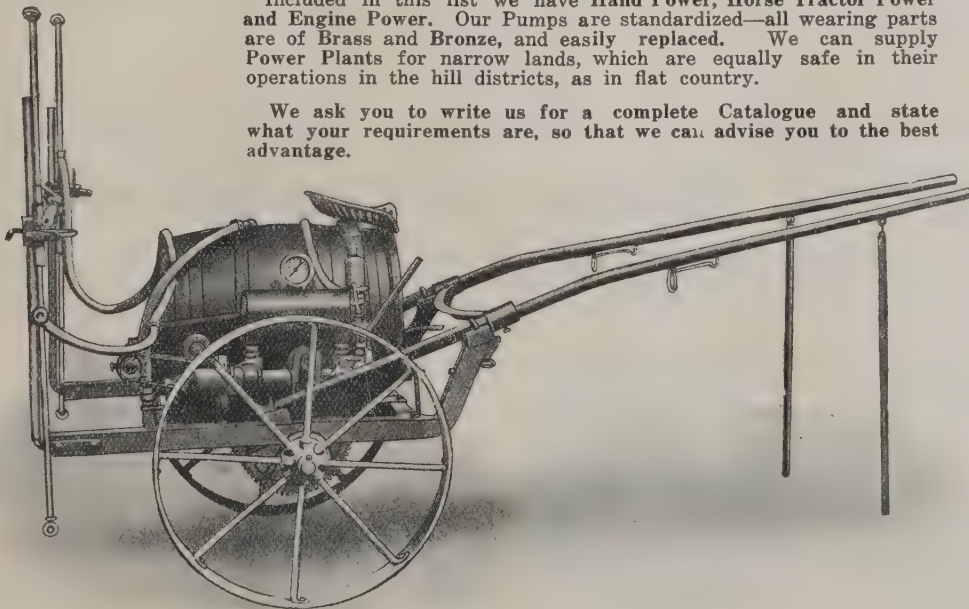
The Fruit Growers' Supply Company enables Exchange members to effect valuable savings in the purchase of orchard materials and packing house supplies.

## METTERS NUFREND SPRAYING OUTFITS

We are taking this opportunity of introducing ourselves as makers of SPRAYING OUTFITS as an adjunct to our many other lines. WE HAVE A CATALOGUE OF SPRAY PLANTS which should fill any requirements in the VINEYARD or ORCHARD, also for the BLOWFLY PEST.

Included in this list we have Hand Power, Horse Tractor Power and Engine Power. Our Pumps are standardized—all wearing parts are of Brass and Bronze, and easily replaced. We can supply Power Plants for narrow lands, which are equally safe in their operations in the hill districts, as in flat country.

We ask you to write us for a complete Catalogue and state what your requirements are, so that we can advise you to the best advantage.



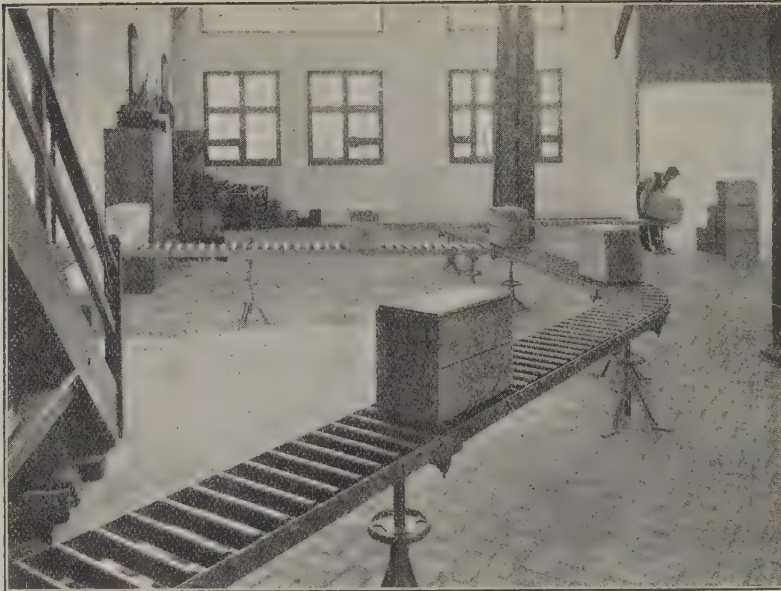
Catalogues posted free to any Address.

**METTER LIMITED, 142 Rundle St., ADELAIDE, S.A.**

Victorian and Tasmanian Agents—The FARM & PASTORAL SUPPLIES Pty. Ltd., 500-2 Bourke St., Melbourne.



FRUIT GROWERS



COOL STORES

**Our Gravity Ball Bearing Roller Conveyor** will solve your handling and conveying problems by carrying your cases wherever you desire. **No Power Required**

Substantial Construction - Long Life - Easily Transported - First Cost is Only Cost

Made in Australia by **SCHUMACHER MILL FURNISHING WORKS PTY. LTD.**, Port Melbourne Victoria

## Special Notice to Fruitgrowers

In response to numerous requests from growers for information as to who are members of the **WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA**, the following list is given. All are members of the above Association, and are registered firms:—

**H. M. Wade & Co.**, 471 Flinders Lane, Melb.  
**T. Stott & Sons**, 11 Western Market, Melb.  
**F. Booth & Sons**, 15 Western Market, Melb.  
**H. L. E. Lovett & Co.**, 410 Flinders Lane, Melbourne.  
**A. E. Pitt**, 12 Western Market, Melbourne.  
**J. Davis**, 13 Western Market, Melbourne.  
**G. Woolf & Sons**, 3 Western Market, Melb.  
**W. S. Tong**, 4 Western Market, Melbourne.  
**Silk Bros.**, 441 Flinders Lane, Melbourne.  
**J. G. Mumford**, 449 Flinders Lane, Melb.

**J. W. Ross**, 6 Western Market, Melbourne.  
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(Extract from the "Bunyip and Garfield Express," 12th November, 1926.)

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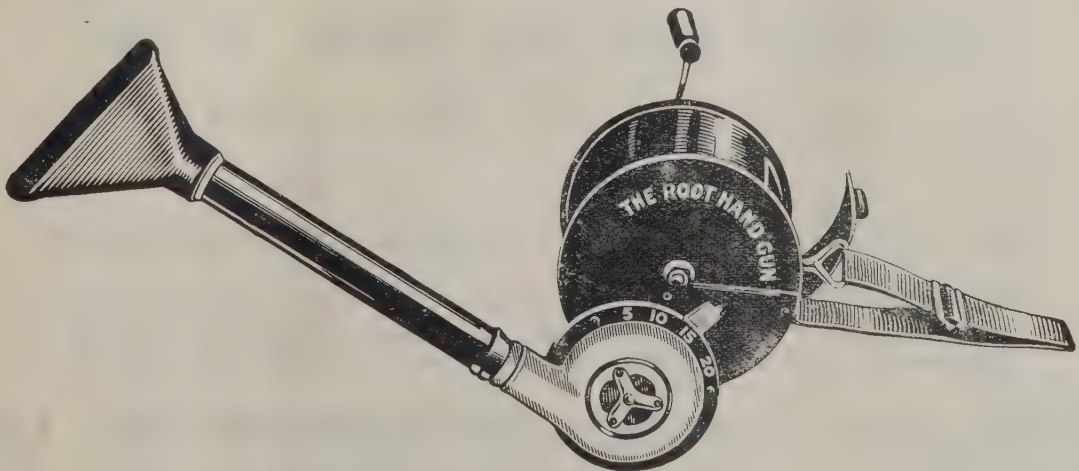
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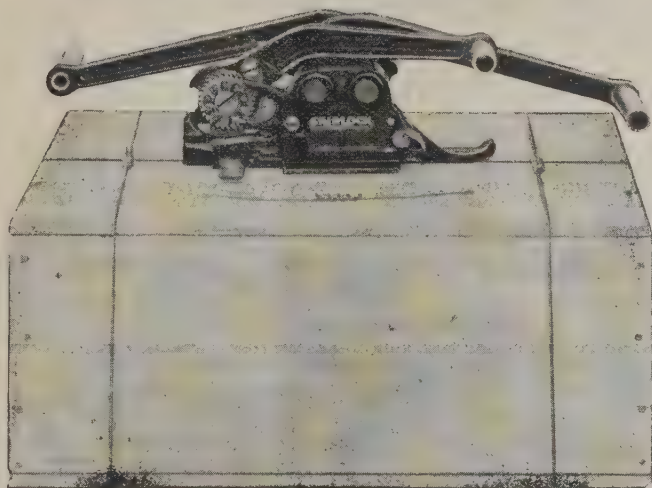
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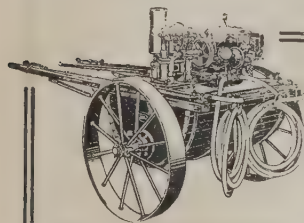
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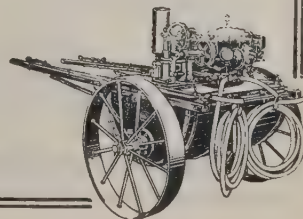
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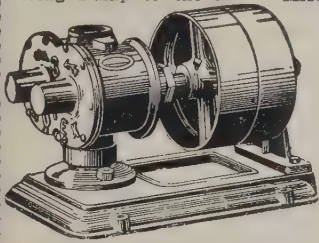
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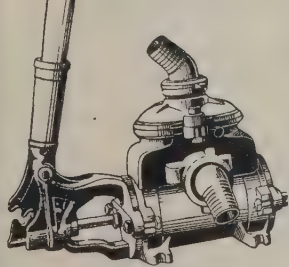
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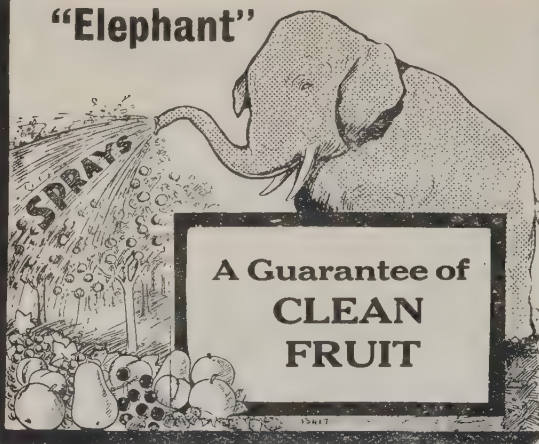
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**"FRUIT WORLD OF AUSTRALASIA."**

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of each Month.

**Editorial and Management Notices.**

**Articles and Photographs.**—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printer's MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked "Photos, only," will travel at 2 ozs., 1½d. A short description of the photos, should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

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"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States, as set out below.

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Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

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"The Fruit World" Offices (where copies and full particulars are obtainable) are as follows:—

**VICTORIA** — Bank House, Bank Place off 410 Collins Street, Melbourne.

**NEW SOUTH WALES** — 8 Bridge Street, Sydney.

**South Australia:** W. F. McConnell, Grenfell Buildings, Grenfell Street, Adelaide. **Tasmania:** Saunders & Co., Murray Street, Hobart. **Western Australia:** D. L. Hetherington, Colonial Mutual Buildings, St. George's Terrace, Perth. **Queensland:** Gordon & Gotch Ltd., Queen Street, Brisbane. **New Zealand:** Gordon & Gotch Ltd., Wellington, Dunedin and Auckland. **Great Britain:** Harvey H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

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**E. H. WRAGG,** Secretary and Advertising Manager.

**Tasmanian Director:** HON. L. M. SHOOBRIDGE, M.L.C.

**THE SEASON'S GREETINGS.**

Peace and Goodwill.

WE take this opportunity of wishing all our readers with great heartiness "A Merry Christmas and a Happy New Year." The old year is passing with all its vicissitudes and failures. Familiar faces pass, and new joys enter our homes.

With goodwill to our fellows, kindness and toleration to all, with courage and faith, all the problems which beset us will be effectively handled. May the lessons learned in life's school in 1926 be remembered so that in the New Year we can all step forward into a larger life of usefulness, according to our several abilities. Some can do this, and some that, but we all can—be kind.

Severe floods and a late snowstorm have reduced the fruit crops in some districts of New Zealand.

The Berri (S.A.) Show, held on October 16, was highly successful, with good exhibits and record attendance of about 1,300. Improvements had been made to the grounds.

**PERSONAL.**

Mr. W. J. Kimber has been appointed Secretary of the South Australian Fruitgrowers' and Market Gardeners' Association.

Mr. Vincent Ellingworth, of 440 Little Collins-street, Melbourne, has just returned from a brief business trip to the Old Country, where he made some interesting observations in regard to the marketing of Australian fruit, and collected valuable information regarding export.

Cr. Jas. Jordan, of Mulgrave, a well-known figure in the Victorian fruit industry, has just returned from a trip to the old country. We hope to publish some of Mr. Jordan's impressions in our next issue.

**Tasmania, a Splendid Opportunity.**—Considerable interest attaches to the fact that the property known as Redcotes, Bagdad, Tasmania, is now for sale, with or without this season's crop. This desirable property—which is 22 miles from Hobart—is well known in Tasmania. There is a charming homestead surrounded by English trees, and beside a running stream. Telephone, gas and water laid on. There are 35 acres of fruit, mainly Apples. Further particulars are given on page 557 of this issue. Those interested should write to Mr. G. T. Butler, Redcotes, Bagdad, Tasmania.

**FRUIT FLY.**

Poison Spray as a Means of Control.

While the regular collection and destruction of infested fruit must be regarded as the chief means of checking fruit fly, in an extensive field trial carried out by the Entomological Branch of the N.S.W. Department of Agriculture last season the use of a poison spray resulted in a very appreciable reduction in fly-infested fruit. The trials will have to be continued over several seasons before it can be definitely stated how useful this poison bait should prove in assisting in the control of fruit fly, but growers are recommended to give it a trial.

The formula of the spray recommended is as follows:—Juice of one dozen Oranges or 18 Peaches (rejects), 4 lb. molasses, 8 oz. arsenate of lead paste or 5 oz. of arsenate of lead powder; water sufficient to make up to 4 gallons.

The spray is usually applied to the foliage at the rate of 3 or 4 oz. only per tree by some suitable spray apparatus or syringe, not spraying the whole tree but just applying the mixture in patches, care being taken, especially with Peaches, to avoid the fruit, to which the spray is likely to adhere and on which it is likely to show. The earlier the spraying is commenced before the fruit ripens the better; that is, it is better to commence seven or eight weeks before the fruit is pulled, but spraying four or five weeks before ripening is valuable. A fresh application should be made every seven days. This means, therefore, at least four applications, but preferably six, and if rain occurs after the spray has been applied a fresh application will have to be made.

In recommending a trial of this bait (write officers of the Fruit Branch of the Department) it is not in any way suggested that the regular collection and destruction of infested fruit should cease. This will remain the chief method of reducing the infestation of fruit fly. It is hoped, however, that baiting will prove a good auxiliary method.

**FROST KILLS THE TOMATOES.**

Reports from Bendigo and northern districts received by the Horticultural Division of the Department of Agriculture state that severe frosts occurred during the first week in November, killing off the Tomato plants. In many places entire replantings will have to be made.

## Editorial Chats



### THE AUSTRALIAN FRUIT COUNCIL.

#### What is its Future?

Has the Australian Fruit Council come to the end of its career? Its existence depended upon Advisory Boards in the several States, and as these are gradually disappearing, it would seem that the Australian Council can function no longer.

At the last meeting, held at Melbourne in Sept., 1925, members freely stated it was their "swan song." The then Minister for Markets, Sir Victor Wilson, announced that no more funds would be provided by the Government. On that finance the Council depended.

The position of the State Fruit Advisory Boards may be stated thus:—

**Queensland.**—No Board appointed.

**New South Wales.**—Being superseded by Fruitgrowers' Federation.

**Western Australia.**—Wound up.

**Victoria.**—Very shaky.

**Tasmania.**—Operating successfully by voluntary levies on export fruit.

**South Australia.**—Not functioning.

All credit must be given to the Government for its efforts thus to assist in organising the industry. The plans were given a fair trial, but whatever may be the experience in other industries they were not suitable for fruit. It was like putting on the roof before the foundations were laid.

Success in fruitgrowers' organisations will come when individual districts organise; these district groups to merge into a central or State Council. Such will naturally fall into groups to deal with specific fruits. Apples, Citrus, canning fruits, berries, vine fruits, etc., with other groups or sections according to needs.

It is difficult to imagine one all-embracing "fruit" council to operate for the industry. It cannot be done, the interests are divergent and often clashing. Each section must work out its own salvation. Practical experience in Australia as well as in other parts of the world confirms this.

The Australian Fruit Council has had a chequered career. Grading regulations were adopted which experience has proved unworkable, yet the efforts of the Council to have the

grades amended have so far failed. Then, after a section or Committee secured permission to ship "blemished" Apples, the full Council met and censured the Committee and the Government.

The Council was never truly representative of the industry, as its members were appointed from the State Boards, which were undemocratic. State Ministers made or refused appointments at their will, and frequently resolutions, carried by growers' own conferences were negatived by the Advisory Board.

If the practical lesson from this failure be learned, the efforts will not have been in vain.

It is in the hands of the growers themselves to organise in their own districts, and uniting in large groups as success is obtained. That is like the growth of a child or a tree. All healthy growth is slow—but sure. Nature does not like short cuts.

Conversations are taking place in regard to the calling together of the Australian Conference of Fruitgrowers, with its helpful meetings in the different States.

### FRUIT EXPORT CONTROL.

(To the Editor, "The Fruit World.")

Sir,—At our half-yearly meeting, held on November 4, at which 40 members were present, the final payment for fruit supplied during the past season was distributed, making the nett price, after all working expenses were paid, a very satisfactory one.

This organisation, which has become firmly established under the capable management of Mr. C. H. Jost, has, since its inception, been most successful, due to the diligence of the manager and the faithful co-operation of the members.

Mr. Ward, Superintendent of Horticulture, was present, and expressed himself concerning the industry; to which, in reply, it was stated that the activities of the Department were greatly appreciated, inasmuch as supervising the working of orchards and vineyards, the combating of disease and pests and the striving for the production of first-quality fruit, etc., but we do not wish any Department to grow our fruit for us,

neither do we desire that it should sell it for us. Freedom, unhampered, to buy and sell, together with fair competition, is all that is required by the man who is capable of attending to his own affairs.

With business conducted upon lines such as ours, no Act is required to compel co-operation.—Yours, etc.,

H. H. HUGHES, Sec., Quantong  
Fruitgrowers.

6/11/26.

### AUSTRALIAN CONFERENCE OF FRUITGROWERS.

Mr. J. Donaldson, "The Grove," Paradise, S.A., writes:—I am pleased to know that there is a move on foot to establish again the Australian Conference of Fruitgrowers, as nothing, in my opinion, kept the interest in the different States more before the whole of the fruitgrowing industry than the Conference. I think we can thank the National Fruit Council and Mr. Rodgers for the knock-out; perhaps had he been returned to office at that time, he might have helped us through with the Council.

### "FRUIT WORLD'S" SUGGESTION APPRECIATED.

Mr. F. W. Vear, a well-known expert in the fruit industry, writes from his orchard at Healesville, Vic., on November 17th:—Fruit Export Control Board. Following your suggestion that two representatives be sent during next season, I would suggest that one grower be appointed, and one business man also; these together should be able to determine what is the position at the other side.

Very little, if any, fruit will be sent away from Victoria this year, and it would be a good time to clear the matter up.

From statements made in the House, and reply by the Minister, the matter is most confusing, and should be finalised.

I would be pleased to contribute to the expenses of the delegation.

**Crop Reports.**—Numerous additional reports have been received, which are held over till next issue.

### CORRECTION.

In our November issue, page 547, there was a typographical error in connection with the estimates of the U.S.A. Apple crop, the word "barrels" being used instead of bushels. The paragraph should read—The commercial Apple crop on August 1 was estimated at 118,677,000 bushels, as compared with 99,132,000 bushels in 1925 and 90, 307,000 on a 5-year average.



# The Season's Prospects

## Fruitgrowers' Crop Reports

### NEW SOUTH WALES CROP PROSPECTS.

Mr. G. D. Ross, Under-Secretary for Agriculture, Sydney, reports on November 20, as follows:—

As regards **Citrus** crop prospects this season, with the exception of inland **Citrus** growing areas, chiefly on the Murrumbidgee Irrigation Area, all coastal districts are needing rain. Orchards which have been ploughed early and well cultivated, however, are in good condition.

The main crop blossoming of all varieties of **Citrus** is finished. **Navels** generally have flowered well, with few exceptions, and give promise of a good average yield.

**Valencias** have blossomed very irregularly with a promise of not more than a medium to light crop next season.

**Common Oranges** have also blossomed irregularly, in certain cases light blossom being due to tree exhaustion, but more often, as in the case of **Valencias**, to the premature blossoming of the trees last May; only a medium crop of **Common Orange** varieties can be expected.

**Mandarins** give promise of not more than a medium crop, due to an irregular blossoming.

**Lemons** have blossomed very well generally and should yield a good main crop next winter.

**Murrumbidgee Irrigation Area.**—Generally speaking there is every prospect of a good crop of **Apricots**, but the setting of the **Peaches** has been extremely light. The trees blossomed well, but unfavorable climatic conditions during the blossoming period prejudicially affected the crop.

**Prunes** are very light, particularly **D'Agén**. In places the **Robes** are showing a little better, but the crop is far from being a good one.

Frost at the time of blossoming is probably a principal reason for the lightness of the crop, with thrip a contributing factor.

**Apples** and **Pears** give promise for a very light crop, and this also applies to **Almonds**.

The vines are all showing well. From indications at the present time, the crop promises to be a heavy one on all varieties, particularly so on the **Sultana**.

The **Orange** trees are commencing to flower, but the showing is light to medium.

**Apples.**—In coastal areas all varieties of **Apples** bloomed most pro-

fusely, but unfortunately adverse weather conditions, and a very bad infestation of thrip have reduced the crop to such an extent that it is now likely to range only from light to medium. The best that can be hoped for is that the reduced number of **Apples** will be compensated for by improved size and quality.

**Thrip** did a good deal of damage also on the tablelands, where our chief **Apple**-growing centres are. The blossoming was heavy, but thrip took heavy toll, especially on late blossoming varieties. In all probability a reduced crop will be the result.

**Pears.**—In coastal areas the crop of **Pears** promises to range from light to medium. Blossoming was very good, but as in the case of **Apples**, adverse weather conditions and thrip have spoilt the promise of the blossoming period.

**Cherries.**—Generally speaking early kinds are light to medium, whilst late varieties give promise for a slightly better crop.

**Peaches.**—In coastal areas the setting of early **Peaches** has been so heavy that there is every promise of a prolific crop, so prolific indeed, that thinning must be resorted to by those growers who regard size and quality as prime consideration. Later varieties are light to medium. Upon the tablelands, crops of **Peaches** are very uneven. In some localities fair crops are reported, whilst in other localities the crop is practically a failure. In most cases heavy late frosts were the agents of destruction.

**Prunes** and **Plums.**—Indications with respect to **Prunes** point to a good crop, whilst in the case of **Plums** the crop promises to range from light to medium. **Japanese Plums**, which are grown extensively upon the coastal areas, display great diversity of productivity, and this is also true of **European** varieties, chiefly grown upon the tablelands.

**Apricots.**—In some localities there is every promise of a good crop of **Apricots**, whilst in other parts the crop is extremely light.

**Grapes.**—With reference to early table **Grapes** grown in parts of the coastal districts of New South Wales, there is promise of a good crop, which should prove satisfactory to growers. The vines are looking well, and a good harvest is anticipated.

### KATOOMBA, N.S.W.

**Principal Fruits.**—All kinds of deciduous fruits, including berries, do

well in this district. **Citrus** fruits are not grown.

The prospects for this season's crop are extremely light. **Pears** are a complete failure. **Apples**—**Prince Alfreds**, medium; **Lord Suffields**, medium; all other kinds, including **Five Crowns**, **Jonathans**, a failure, owing to late frosts and the thrip. **Stone fruits**, including **Cherries**, **Plums**, and **Peaches**, light; berries, a failure.

This branch of the **Agricultural Bureau** intends to endeavour to establish a local market, and to ask the **Agricultural Department** for a refund of the **Orchard Tax**; that will stimulate a nucleus fund towards the market.

A paper will be formulated to educate the public to eat more fruit, by pasting an illustrated placard on the end of each fruit case, giving the analysis of the food value of fruit, etc. A sample, when approved, will be forwarded in due course.—**Chas. Wooller**, Acting Secretary and President, **Katoomba Branch N.S.W. Agricultural Bureau**.

### GLENORIE, N.S.W.

This is a well-known **Citrus** district, but a large acreage of early **Apples** (**Nelson**, **Allsop** and **Carrington**), and **Plums** (**Wilsons**, **Duffys**, **Wickson Seedlings** and **Santa Rosas**), is grown. They are proving very profitable as the district is an early one.

The crop of all these kinds is very light, and will not probably be half the production of last season, which was a light one, although the crop was a fine sample. Owing to nearly five months continued dry and windy weather, the crop is both small in number and size. All spring sown vegetable crops have been a failure.

The **Citrus** varieties (with **Mandarins** excepted), have bloomed very lightly, in some cases not a color of bloom, and the outlook for next season's main crop of **Citrus** fruit in **Cumberland** is not encouraging.

There has been no substantial planting this season, it will hardly balance with the number of acres destroyed. The shadow of a basic wage declaration for the whole of the State, also a claim from the **A.W.U.** for shorter hours and larger pay will result, not in planting, but grubbing out. The claimant union has chosen a particularly bad time to press its claim; adverse seasonal conditions, and a light crop and gloomy prospects for the next **Citrus** season are all against the adoption of the rates of pay set out in their schedule. I regret to report that a local **Fruit** and **Flower Show** will not be held this season.—**F. A. Nicolson**, **Glenorie, N.S.W.**

## GRIFFITH, N.S.W.

The principal varieties grown here are Apricots, Canning Peaches, Wine Grapes, Table Grapes, Apples, Pears, Washington Navels, and Late Valencia Oranges.

Prospects are:—Apricots, heavy; canning Peaches, very light; wine and table Grapes, present indications good; Pears and Apples, practically a failure; Washington Navels, normal; Valencias, present indications heavy.

The Producers' Co-operative Company have decided to erect, for next Orange season, a new Citrus packing house, complete with modern equipment. New share capital to cover the cost is being canvassed for. The company expects to commence building operations early in the new year.

The main feature of the new packing house will be the washing and drying machinery, the necessity for which was very evident on this season's crop, of which a large proportion was badly affected with black smut following on an extensive infestation of soft brown scale during the mild autumn and winter.—Griffith Producers' Co-operative Co. Ltd., per J. S. Vagg, Assistant Manager.

## TASMANIA.

## Cygnet (Huon).

Principal fruits grown in this district are Apples, Pears and small fruits.

The continuous wet weather following an abnormally dry season (which was very severe on the trees), has had a very bad effect upon the setting of all varieties of Apples. The principal varieties of Apples are Sturmers, Cleopatras, Jonathans, Crabs, Scarlets, Croftons, Democrats, Ribstones and Green Alfristons, with unfortunately about 50 other varieties.

The Apple crop on the whole is exceptionally light; Sturmers are very variable, but on the whole light; Cleos., light; Jonathans, patchy; Crabs, light; Scarlets are good and show up better than any other variety; Ribstones, light; Alfristons, fair; Democrats are extremely light, many trees showing blank. This variety was a very heavy cropper last year. There will not be one-third crop this season; on the whole I should say that we shall not pick more than 40 per cent. of last season's crop. Pears on the whole are good.

I notice Apples showing rust already through excessive Bordeaux spraying, which is very unfortunate; it is especially noticeable on the Sturmers, and in my opinion this is one of the principal factors in spoil-

ing the sale of this very fine Apple on the Sydney market.

Unfortunately in this very fine and big fruit-growing district of the Huon, we have no experimental fruit farm. Individuals cannot afford to run the risk, especially a season like this, by trying the lime sulphur spray.

The Government officers have carried out many experiments with spraying latterly, but on individual orchards, which is a big handicap to the officials and unsatisfactory to the orchardists generally.

A fruitgrowers' Protective Union has recently been formed in the Huon, with Mr. Win, of Cygnet, as President; this is an excellent step, and it is to be hoped most of the growers will join, as it might lead to what we are so badly lacking in—organisation—which should mean uniformity and standardisation.—H. C. Connor, Cygnet, Tas.

## PREMAYDENA, TASMANIA.

Apples are the principal fruits grown in this district, with a good percentage of Pears in some orchards. Jonathan, Cleopatra, Democrat and Sturmers are the main varieties. We had a very heavy crop of Apples last season, and a good crop of Pears. I have been in the majority of the orchards in this district during this month, and have estimated the Apple crop at 70 per cent. of normal, and the Pears a good average crop. Both Apples and Pears are practically free from black spot, and other pests.

Cleopatras grow almost to perfection in this district. There is more of this variety of Apples grown here than any other. Jonathans and Democrats also do particularly well.

For several seasons I have been using atomic sulphur as a preventive for powdery mildew, and have had excellent results.—F. R. Kingston, Premaydena, Tas.

## LATROBE, TASMANIA.

(1) The principal fruits grown are Apples—Jonathans, Sturmers, Dunn's, Rome Beauty, Five Crown, Alfristons, Cleopatra, and many others; Pears, in small quantities only.

(2) Crop Prospects.—Light to medium, not more than 60 per cent. of last year, which was a heavy crop, but much small fruit to waste.

(3) There are no new installations or equipment to report, and no new plantings; on the contrary, many of the orchards have been allowed to go to ruin, principally owing to the heavy cost of all material to use in preparing the fruit for market; freights and all other expenses are too high, working expenses leave nothing for the grower.

I exported to England last season,

6,800 cases, which cost me to prepare for market, after the fruit was grown and picked, £680; I received advances against shipments, £322; when the returns were all in I was £60 in debt for the year's work.

I notice there is an attempt to be made to have a Board of Control for the export and sale of all oversea shipments, coupled with an Act of Parliament with laws, rules and regulations, that would cripple the Apple and Pear growing altogether. Conditions that would suit one State would be quite antagonistic to another. Each State should have its own Control, without Government interference, because red tape is very expensive.—A. Boatwright, Latrobe.

## LALLA.

Apples and Pears are the fruits chiefly grown here.

Apples are decidedly lighter than last year, probably will yield about 75 per cent. of last year's crop. Dunn's and Tasma, very light.

Pears are a good crop; all kinds appear to be carrying a full crop.

Black Spot so far is not showing badly, yet it is present upon a few Pears.

Plums on the whole show a good crop. The above applies to our Deviot orchard as well as Lalla.—Frank Walker, Launceston, Tas.

## WINKLEIGH, TASMANIA.

The principal fruits grown are:—Apples—C.O.P., Sturmer, Jonathan, Crofton, Cleo.; Pears—B. Bosc, Winter Cole, Williams.

Crops of Apples are not likely, from present indications, to reach more than 60 per cent. of last year's crops, but fruit promises to be very free from disease.

The majority of growers here are anxious to secure better organisation for the purpose of marketing, and are looking forward to a trial being given to the proposed Export Control Board.—Neil Campbell, M.H.A., Winkleigh.

## CASTLE FORBES BAY.

Apples.—Crops are about half of last year. Pears.—More than last year, good crop. Black Currants.—About half crop. Raspberries.—Good.

Tractor ploughs are beginning to make their appearance in the district now, but the weather has been against their use, owing to so much rain. Growers are all behind with their work. Lead sprays had to be abandoned for the calyx stage.

Mr. F. G. Norris' new roller pump is of great advantage to orchardists in getting over their spraying, as the roller holds 120 gallons, and is just as easy to handle as the ordinary 80 gallon motor pump.



## SOUTH AUSTRALIA.

## Paradise, S.A.

The principal fruits grown are Apricots, Peaches, Pears, Nectarines, Oranges, and Lemons.

Apricots are showing a good crop. Pulps are fairly well used up; prices offering about £12 for canning purposes, which is satisfactory.

Peaches promise a fair crop, with an increase in supply of Clings, as the young trees are now coming into bearing.

Pears are only medium; not many grown in our district.

Oranges.—It is rather early to mention Oranges, but from appearances the crop will be on the light side.

Our Association is in favor of the Fruit Marketing Bill now before Parliament, as a substitute for the Orchard Registration fee. Mr. Kimber is doing well as Secretary, and things are again moving with the Association.

Interest is centred on the Tomato question this year; stocks are low and there is a demand for the pulp. Growers are planting heavily, risking blight.—J. Donaldson, Paradise, S.A., 17/11/26.

## Mypolonga.

With the exception of a small acreage of Plums (Jap.) and early Apricots, the principal fruits grown here are drying varieties of Apricots, Peaches and Nectarines, and in vines, Currants, Sultanas and Lexias.

Moorpark Apricots are promising a fairly heavy crop, Peaches and Nectarines are lighter; there was a good setting of most varieties, but very rough weather during the last two or three weeks brought about a fairly heavy fall. Vines, now in the early flowering stage, are promising well in all varieties; with favorable weather from now on good crops should be harvested.

One of our growers is installing a "Little" dehydrator, and the result of his labors therefrom will be watched with interest, as further plants may be installed if his results prove satisfactory.—H. Blizard, Mypolonga.

## Coonawarra.

The crop prospects here this season are not at all satisfactory. The cold snaps aided by thrip have greatly reduced the Peach, Pear and Apple crop.

The principal fruits grown here are Apples, Pears, Prunes and Apricots. Wine Grapes of course are largely grown, and up to date promise good crops.

**Crop Report.**—Apples, fair; Pears,

light; Prunes, very light; Apricots, good; Grapes, good.

Several new vineyards have been planted in the district, and large additions are being made to the wine cellars.—Fred. Darwent, Coonawarra, South Australia.

## Berri.

(1) The principal fruits grown are—**Drying and Wine Grapes.** Drying—Sultana, Zante Currant, Muscat. Gordo Blanco. Wine—Doradillo, White Hermitage, Shiraz and Grenache.

Apricots—Drying only—Moorpark and Royal.

Peaches.—Drying only—Elberta, Early Crawford and Salway.

Nectarines.—Drying only—Goldmine.

Prunes.—D'Agen, Splendour, Sugar.

Pears—Williams.

Figs—Smymna, White Adriatic.

Almonds—Brand's Jordan, I.X.L., White Nonpareil, Hatch's Nonpareil, Peerless.

Oranges.—Washington Navel, Valencia Late, Mediterranean Sweet.

Mandarins.—Beauty of Glen Retreat, Dancy, Emperor.

Lemon.—Lisbon.

## (2) Crop prospects:—

Grapes.—Sultanas, very fair to heavy, heavier than last season; Zante Currant, very fair to heavy, about same as last season; Muscat. Gordo Blanco, very fair to heavy, about same as last season; Doradillo, fair to good, about same as last season; White Hermitage, fair, about same as last season; Shiraz, fair, about same as last season; Grenache, fair, about same as last season.

Apricots.—Moorpark and Royal, fair to heavy, heavier than last season.

Peaches.—Light to fair, lighter than last season.

Nectarines.—Light to medium, lighter than last season.

Prunes.—Light to fair, lighter than last season.

Pears.—Light, lighter than last season.

Figs.—Too early to estimate.

Almonds.—Good, heavier than last season.

Oranges.—Very fair, about same as last season.

Mandarins.—Fair, about same as last season.

Lemons.—Very fair, about same as last season.

## (3) Items of interest:—

Light frost on October 16, cut back a few Sultana vineyards in low-lying situations.

Anthraxose (black spot) of the vine, made its appearance in some vineyards early in the season, but

did not spread; the damage through this disease so far is negligible. Some "curl leaf" of the Peach was in evidence early in the season, but not sufficient to affect the crop.—C. G. Savage, Deputy Horticultural Instructor and Manager, Berri Experimental Orchard, Berri, South Australia.

## Balhannah, S.A.

THE SPRING has been very wet and cold during the period of blooming of most of the early varieties of Apples, a violent hailstorm having hammered the foliage about very considerably. Plums have set a light to medium crop, and the hail has badly marked the crop.

The main variety of Apple grown here, viz., Jonathan, has set practically nothing at all, although in a good number of cases they bloomed heavily.

It is still a little early to form an opinion as to some of the late varieties, but Romes are promising well in patches, while Londons are also very good in some places, but in no way uniform with regard to blooming.

Summing up, the Plum crop will be light to medium, while Apples will be very light to a below medium crop in this district.

Because of the very heavy rain and hail which occurred right in the midst of the spring rush of work, quite a number of orchardists are experiencing difficulty in completing their ploughing, as the ground has been hammered down, and has set hard, and up to time of writing there has not been sufficient rain to soften the land to enable this work to be resumed.—H. N. Wicks, Balhannah

## Blackwood.

(1) The principal fruits grown are Apples—Jonathans and Cleos.; Pears—various, Williams and Packham's Triumph; Apricots—Moorpark.

(2) Prospects for Pears and Apples, very light crop.—Edwin Ashby and Son, "Wittunga," Blackwood, S.A.

We are in for a very light fruit season. Most varieties of commercial fruits are light to very light.—Rodney Fowler, Manager, Blackwood Experiment Orchard, S.A.

## VICTORIA

Hastings.—Reports received by the Horticultural Division of the Department of Agriculture from the Hastings and Somerville districts indicate prospects of a 30 per cent. Apple crop throughout the district. Pears are slightly better, and a normal crop is expected of Apricots. The fruit crops as a whole are expected to give

a 35 per cent crop throughout the district.

It is stated that the variable weather conditions experienced, with frequent changes from heat to cold, have had as much effect as the thrips in reducing the setting.

#### Croydon.

The principal fruits grown in this district are Apples, Pears, Plums, Cherries.

The thrip has done a great deal of damage to the fruit crops; in fact, there is not 1 per cent. of Apples and Pears in the district this season. The Cherry crop is exceedingly light, about one-quarter crop, and at the present time, as the Cherries get ripe, the thrip is sucking the juice from the ripe fruit. There is no doubt this is the most disastrous season fruitgrowers have experienced.

With Apples and Pears, had the season been normal, and no thrip, I should have picked 16,000 cases; but from the present appearance, at the most I will have only about 800 cases of Pears and no Apples.

I put a lot of work in spraying with black-leaf 40 and oil as soon as I saw the thrip, giving the trees four sprayings with the above mixture in addition to the regular lime-sulphur sprays, but am sorry to say with no good results.

It is very disappointing that the Agricultural Department has done no experimental work in trying to cope with this pest of thrip. We have had it more or less every year, and lose a large quantity of our late-blooming sorts of Apples. One would think with this knowledge, something should have been done by the experts in the Department, but from my experience we orchardists get very little benefit from the staff kept to assist us.

The loss this year to the orchardists of Victoria through this thrip plague will be considerably more than £500,000, and I estimate every year there are a good many thousands also lost through the thrip. I therefore think the Government should do all in its power to discover some means to combat this plague, or one of the best rural industries will be knocked out.—W. Lipscombe, Croydon, 16/11/26.

#### Somerville, Vic.

**Principal Fruits Grown.**—Apples and Pears, with a percentage of Plums and Apricots.

With regard to the season's prospects; they are anything but bright, Apples and Pears being so light generally, that it is hard to form an esti-

mate. Perhaps, taking the district as a whole, the percentage may be 15 to 20 per cent. crop. I have heard only of two orchards in the district with anything like a medium crop. Quite a number of orchardists here do not blame the thrip wholly for the light crop; they maintain that some seasonal effect was much to blame.

Plums appear to be about an average crop; Apricots, good crop and splendid size.

I have heard that there is an idea to try and come to some arrangement with the neighbouring districts, as to storing in one cool store and closing the others for the season. Whether this can be put into effect successfully or not time will tell.

It is most unfortunate (of course for all growers), that such a poor crop is likely to result, but both Somerville and Tyabb Cool Stores contemplated big improvements this season, the former installing electricity and the latter extending their store at the cost of about £1,200. General approval is heard on all sides of Mr. Chandler's action in bringing the matter before the House to curtail the redemption payments this year.—W. P. Hutchinson, Somerville, Vic.

#### Beaconsfield, Vic.

I have lost all my fruit except about 60 or 70 cases Romes, 20 cases Jonathans, and about 15 cases Granny Smiths. All the Yates Apples fell off during the blossoming.

I used all the sprays recommended—crude oil and soft soap in July; lime sulphur and black-leaf when buds were swelling, strong solution, and 10 days later I applied a weaker solution of lime sulphur and black-leaf; and after setting I gave them another application of lime sulphur and black-leaf; then I applied the calyx spray of arsenate of lead lime sulphur and black-leaf before the calyx of the Apples closed. I am going to use a lighter spray of arsenate of lead and lime sulphur to save the apples that are left.

I am anxious to know if a remedy is discovered to stop the thrip in the future.—Geo. E. Miers, Beaconsfield, 11/11/26.

#### Portland.

(1) Principal fruits grown.—Apples mostly, some Pears.

(2) Crop Prospects.—Early flowering Pears good.

Apples.—Jonathans, comparative failure; Romes, generally good crop; Five Crowns, very light; Sturmers, largely failure; Munroe's, heavy crop.—W. J. Williamson, Portland.

#### Ardmona.

(1) This district specialises in Peaches, Apricots and Williams Pears. Peaches are dessert, and canning varieties. Table Grapes are also grown.

(2) Crop prospects.—Apricots have best showing for last ten years. Peaches—Dessert varieties are very light, almost a total failure in many orchards. Canning varieties, mid-season in all orchards are very light; some patches are not worth picking. Average about one ton to the acre. Late Clings—About half the crop of last year is showing now. The crop is very patchy and hard to estimate. Pears vary from a complete failure on some orchards, to a heavy crop on others, but show great variations in every patch. Trees with heavy crop have alongside them trees with only half a dozen fruits. I estimate about 50 per cent. of last year's total crop for this season.

(3) There have been no new plantings except to replace old trees.—V. R. McNab, Ardmona, 17/11/26.

#### Doncaster.

(1) The principal fruits grown are Pears, Peaches and Apples.

(2) Crop Prospects.—Peaches, very light to medium; Pears, very light in most varieties, a few sorts are fair, but the leading varieties are almost a total failure; Apples are extremely light, many varieties are blank.

(3) There is not much done in new plantations in our district; the land is too dear. It would not pay anyone to buy land to plant orchards, especially as labor is also too high. I think the only place to plant orchards now is on richer land, and where one has not to put in so much labor.—A. F. Thiele, Doncaster.

#### Harcourt, Vic.

The principal fruits grown here are Apples, Pears, Plums, some Cherries, few Apricots.

**Crop Prospects.**—Less than 15 per cent. of last year's. Harcourt, in its time has experienced frosts, droughts, black spot, and has suffered more or less from fungus and insect pests, but has never had so disastrous a visitation as the thrip invasion this season. Pears, with the exception of W.B.C. variety are negligible. The popular Apple, Munro, of which there might easily have been 100,000 cases produced in the district this season, has been cut down to perhaps less than 2½ per cent., while other Apples have suffered similarly; Cleos. being the best. It is more than probable that our cool store will not open. The outlook is not at all cheerful.—E. Pritchard, Harcourt, 16/11/26.



# The Canned Fruit Industry

An Address by Mr. J. M. Ward, Vic. Superintendent Horticulture.

Broadcast by 3LO, Melbourne, November 10, 1926.

WITH a view to popularising the consumption of Australian canned fruits, the Australian Fruit Canners' Association are, from 8th November to 13th November, having a "Canned Fruit Week," during which period, a considerable amount is being done to popularise this class of fruit among the consuming public of the Commonwealth.

By eating more of this delicious fruit, the consumer is performing two good objects, in a most pleasant manner, i.e., he is building up his own body with a pleasing food, and at the same time is helping to build and populate a really wonderful country. We all recognise that Australia requires more, and ever more, population to fill our vast empty spaces. One of the means of doing this is to make greater use of the land. I feel sure listeners in and others will agree that if each one of us will do just a little more than we are doing, the empty spaces would be filled up at a more rapid rate than hitherto.

In doing that "little more," we should consume more of the Australian product. A glance at a map of Australia will show large spaces of territory through which certain rivers flow—those are the great and truly wonderful Murray River, the Goulburn, the Murrumbidgee, the Darling, and other very fine rivers. Portion of the land adjoining these rivers is most suitable for the production of many varieties of fruit, vegetables and other products. This suitability has been proved by the cultivation of the world's best fruit, particularly Peaches, Apricots, and Pears.

To utilise the land in question it is necessary to, by some means or other, conserve the water of these rivers so that during certain seasons of the year it can be brought in contact with the trees and plants, and thus be the means of bringing about increased production. To conserve this water, the Universities are necessary for the purpose of training engineers, chemists, and other professional men—cement manufacture is required, iron and steel works, saw-mills and other works are essential to supply the machinery, cement, timber, pipes, etc., necessary for the construction of dams, and the pumping of the water to the land. The maker of implements, tractors, drays, motor and horse lorries, chemicals for the control of fruit tree diseases, are also essential.

When the fruit is harvested, the canning factories are required for the purpose of turning a perishable product into what may be termed a non-perishable one.

The building and working of a cannerly naturally enough provides work for a number of trades and professions, such as tin miners and processors, mechanical engineers, shipbuilders, railways, box and nail factories, printers, paper mills and many other works too numerous to mention. Having grown and processed the fruit, the producers, the real backbone of the Commonwealth, are faced with the greatest problem of all, that is, to sell their canned product at a price that will enable them to have some profit for the huge amount of labor—both brain and muscle—necessary to produce the goods.

So long as profitable returns to growers are experienced, continued closer settlement will result, thus bringing about greater prosperity and happiness to business, professional and other workers.

## Recent Progress.

Whilst it is the earnest wish of every citizen that the canning industry should continue to improve in output, it can be said that the Canned Fruit Industry of Australia has made substantial strides during the past few years; this is only natural when it is realised that during the past ten years the area planted in fruit trees has increased by no less than 85,455 acres, the total orchard acres now under cultivation in the Commonwealth being 275,687 acres, and which offers direct employment to 27,809 Australian workers, whilst the Canned Fruit industry directly employs upwards of 5,000 employees. The product from the area under fruit in Australia was, last year, valued at nearly £18,000,000.

A comparison between the Australian canned packs from 1922-23 to 1925-26, reveals the growth of this industry:—

|                            | 1922-23.<br>dz. tins. | 1923-24.<br>dz. tins. | 1924-25.<br>dz. tins. | 1925-26.<br>dz. tins. |
|----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Apricots . . . . .         | 245,244               | 281,194               | 413,150               | 271,350               |
| Pears . . . . .            | 274,772               | 510,345               | 545,056               | 416,950               |
| Freestone Peaches . . . .  | 93,488                | 135,407               | 187,798               | 39,345                |
| Clingstone Peaches . . . . | 955,583               | 980,923               | 1,254,713             | 1,517,998             |
| Totals . . . . .           | 1,569,087             | 1,907,869             | 2,410,717             | 2,245,643             |

In addition to the above, several hundred thousand tins of Pineapples are canned in Queensland annually.

The processing of Canned Fruits is most interesting, and in the Australian factories all fruits are produced under the most hygienic conditions, and the greatest care is exercised that the pack is hall-marked by its quality.

The manufacture of the tins is an industry in itself.

The cutters and shapers automatically turn out 1 lb. and 2 lb. tins from plain tin sheets. Passing through the automatic body formers, and then through various other machines until completed in rapid succession the tins are finally tested.

To attempt to fill the tins with preserved fruit with even the slightest leak would be courting disaster. The testing machine resembles a huge water-wheel, and carries a hundred or more tins. As it revolves past a given point, a blast of air is charged into each tin, and automatically the defective tins are cast aside, and the fault quickly remedied.

This important operation completed, the tins are rapidly transferred to the filling benches. Here row after row of girls are busily engaged peeling, cutting, and coring the luscious ripe Pineapples and Pears, and cutting and stoning Peaches and Apricots.

After these operations the fruit is thoroughly washed, and graded, and then placed in the cans for treatment.

Canned fruit is packed in various grades, and for this purpose not only is the fruit graded according to size and quality, but the syrup is manufactured on the premises from pure cane sugar in grades to conform with the grade of fruit. This is done in accordance with the Federal Government regulations. The syrup is automatically added, and the tins closed by an automatically closing machine.

The final process is the cooking. The tins are received by a huge steam cooker, in which a certain degree of heat must be maintained. Timed to the second, each tin is discharged from the cooker, cooled off, and then automatically conveyed to the warehouse, where they are stacked and stored until required to be labelled prior to packing for delivery, to all parts of the world.

## Where the Fruit is Grown.

The bulk of the fruit for canning is grown in the Goulburn Valley of Vic-

toria, and in the Murrumbidgee irrigation settlement of New South Wales. There, land which prior to the advent of irrigation, was devoted to sheep raising or wheat growing, now yields rich harvests of Peaches, Pears and Apricots, the quality of which is unsurpassed anywhere in the world. The cultivation of these fruits has been raised to a high standard of efficiency, and to-day the yield per acre, especially in the case of canning Peaches, has reached a figure that 20 years ago would have been deemed impossible.

Without the aid of the canning process, these huge harvests could not possibly be disposed of, and during the fruit season, which lasts from December till April, the highly efficient canneries that deal with the crop, are working at high pressure.

A succession of cool days may delay the ripening of the fruit, then comes a hot spell, and it ripens so quickly that the grower has the greatest difficulty in handling it. Since the cannery is dependent for supplies on the grower, who in turn is dependent on the weather, the rate of production cannot be accurately forecasted, and to avoid waste of fruit, overtime work at high pressure, is inevitable.

#### Markets.

Prior to the war, Australia produced barely sufficient canned fruit to supply the home market. During the latter part of the war, the high price ruling overseas encouraged heavy planting of canning fruits, and immediately after the war the Government settled many returned soldiers on fruitgrowing blocks. As a consequence of this action, the production of canned fruits since 1918 has increased tremendously, until to-day the Australian consumption accounts for only 65 per cent. of the pack.

The surplus of 35 per cent. has to be sent overseas, and owing to certain economic factors, payable returns for this exported fruit are not assured, and until this condition is remedied, the grower cannot expect adequate returns for his labor and investment of capital. The building up of a profitable market for our canned fruits overseas will take time.

In the United Kingdom, for example, the Californians have held the market for 40 years. Their trading organisation is extremely efficient, and the weaning of the conservative British trader from his regular buying channels cannot be effected in one or two years. Time and counter-organisation are required, and to prevent hardship to the Australian growers, a large number of whom are returned soldiers, it is necessary that

a much larger proportion of the annual canned fruits pack should be consumed in Australia.

At the present rate of production, if every family in Australia consumed a tin of canned fruit every week, there would not be nearly enough to supply the demand. Is it outside the bounds of possibility that this rate of consumption can be achieved? Consider what you get in a can of fruit—the equivalent of 2 lbs. of fresh Peaches, Pears or Apricots, prime picked fruit, ripened to perfection—no waste through bruising or over-ripeness, no peeling or coring to do—no fuel expense for cooking—and no sugar required. Do you not consider this good value for the price you are asked to pay for a can of fruit?

Then consider the effect on the grower if all his fruit can be sold in the Australian market—an assured return for his labor, and assured prosperity for himself and his family.



B. D'Anjou Pears, Rogue River Valley, Oregon (U.S.A.). Six acres yielded 22 cases per tree. (Photo by D. B. Adam, B.Sc., Vic. Govt. Plant Pathologist).

This in turn reacts on all of us, since assured prosperity in any one industry means prosperity in every other branch of Australian life. Think of the returned soldiers fighting the battles of peace as well as ever they fought in France or Palestine! They are worth helping—the whole industry is worthy of your support!

You can help by the pleasant method of regularly taking your quota of canned fruits. Give a standing order to your grocer. Tell him to deliver a tin of your favourite brand every week, and remember—

**"Once a week at least, eat Canned Fruits."**

Not nearly enough fruit is eaten by Australians, and an improvement in this respect is eagerly looked for by everyone connected with the fruitgrowing industry.

The average consumption of canned

fruits within the Commonwealth is only three cans of fruit per head of population per annum; if we will make it five cans, the whole of the pack will be consumed by Australians, and we could produce more for the export trade.

At this stage I desire to make an appeal to every citizen of Australia who has relatives in Great Britain, to urge upon his relations overseas to ask for and consume, Australian canned, yes, and dried and fresh fruits, too; if this very practical step is put into operation, I feel sure that our industry will make enormous strides, and more rivers will be needed for irrigation purposes.

#### PRICE FOR CANNING FRUIT.

The Leeton (N.S.W.) Cannery has decided to fall into line with the Associated Cannerys, and pay £12 per ton for all canning fruit during the coming season.

#### FORD PRICE REDUCTION.

Important price reductions are announced by the Ford Motor Co., of Australia Pty. Ltd. The improved touring car is offered at £155; single-seater, £155; one-ton truck chassis, £135; and standard one-ton truck, £160. Favorable terms are available for purchase if desired.





## South Australia

Fruitgrowers' Organisation :: Fruit Marketing Bill  
Record Vintage

### SOUTH AUSTRALIA'S RECORD VINTAGE.

#### Exceeds All Anticipations.

Last month the Government Statist furnished an interim estimate of the yield of the recent vintage, giving the figures as 11,800,000 gallons, says the "Australian Brewing and Wine Journal" for October. He, however, told us that the final output from some wineries had not come to hand, and when they did he anticipated a solid addition to those figures. Those final figures are now to hand, and we learn that 13,074,874 gallons of wine was the outcome of the 1926 vintage, easily a record. The following are Mr. Johnstone's statistics (the figures

**Currants.**—103,910 (109,446) cwt.; 5,536 cwt. below the 1924-1925 season, but 8,091 cwt. above the average of the previous five years.

**Raisins.**—Sultanas, 86,781 (98,045) cwt., decrease, 11,264 cwt. All other, 24,480 (41,340) cwt.; decrease, 16,860 cwt. The total, 111,261 (139,385) cwt., was 28,124 cwt. below the record in 1924-1925, but 23,407 cwt. above the average of the preceding five years.

**Wine Made.**—13,074,874 (10,502,381) gallons, an increase of 2,572,493 gallons, and exceeding the previous record season of 1924 by 2,318,336 gallons, or 21.55 per cent. There were increased quantities of wine made in most districts of the State, but principally in the River Murray districts, due to larger areas coming into bearing, and also to large quantities of drying Grapes being sent to the distilleries. The following are the principal wine districts and the quantities made in each:—Nuriootpa, Barossa, Angaston, Tanunda, etc., 3,516,893 (3,993,949) gallons; M'Laren Vale, Reynella, &c., 2,149,928 (1,671,870) gallons; River Murray, 4,572,327 (2,692,870) gallons; Burnside, Magill, &c., 1,062,258 (1,035,400) gallons; Clare, Watervale, &c., 546,868 (313,311) gallons; Langhorne's Creek, 366,637 (242,929) gallons. Of the total vintage, 7,171,276 (5,651,704) gallons were returned as distillation wine for brandy and fortifying spirit. There were 88 wine-makers, 76 making 1,000 gallons and over.

**Wine Stocks.**—On 30th June last the stocks of wine, including the balance of recent vintage, totalled 13,134,200 (11,772,962) gallons, an increase of 1,361,238 gallons. Of this quantity 2,467,229 (2,329,417) gallons were reported to be the balance of distillation wine still in stock.

**Exports 1925-1926.**—Oversea exports of vineyard production: Currants, 78,570 (84,751) cwt.; Raisins and Sultanas, 79,206 (93,168) cwt.; and wine, 1,200,313 (591,134) gallons, valued at £203,506 (£92,176). In addition, wine was exported to other States as follows:—2,523,434 (2,231,784) gallons, valued at £760,570 (£644,755), making the grand total exports of wine 3,723,747 (2,822,918) gallons, valued at £964,076 (£736,931).

### GOVERNMENT EXPERIMENTAL ORCHARD.

Splendid Enterprise at Blackwood, South Australia.

#### An Object Lesson for Other States.

At the Government Experimental Orchard, Blackwood, South Australia, valuable tests are being constantly carried out.

In this issue there is given a helpful review of some experiments in Codlin Moth control.

For those growers in other parts of Australia who are earnestly advocating Government Experimental Orchards, a visit to the splendid Blackwood Orchard would serve as an object lesson, and strengthen their hands in requesting similar enterprises elsewhere.

### S.A. FRUIT MARKETING BILL.

A Bill has been introduced into the S.A. House of Assembly by the Minister of Agriculture (Hon. T. Butter-

### To Orchardists

Send for Prices of the

**"Bave-U" Sprayer**

to

**E. ROBINSON**

**333 George St., SYDNEY**

field), making provision for the establishment of Boards to facilitate and organise the marketing of fruit. The Bill provides that the Governor may by proclamation declare that any fruits shall constitute a class of fruit for the purposes of the Act. A Board may be established by a petition of growers, or a poll may be demanded by the growers. In the event of no poll being demanded the Minister may establish a Board on receipt of a petition. In the event of a poll being held, a Board shall be established if two-thirds of the growers concerned vote in favor of such a proposal. Money may be obtained by a levy imposed on the growers, and the funds thus raised may be used to facilitate the marketing of fruit, and to encourage the export of a reasonable portion of each year's crop.

COVENT GARDEN,  
LONDON

**Ridley, Houlding  
& CO.,**

**Large Receivers of Australian  
Fruits.**

Solicit Consignments of

**Apples, Pears, &c.,**

Best market prices and prompt  
account sales returned.  
Correspondence invited.  
Representative in Victoria

THE  
International Fruit & Mercantile Co.,  
410 Flinders Lane, Melbourne  
**MURDOCH BROS., Hobart**

in parentheses refer to previous season's output):—

**Acreage.**—50,594 (50,280) acres, increase 314 acres, making an increase of 13,933 acres in five years. The areas were classified as for wine, 30,187 (29,533) acres; drying, 19,643 (19,894) acres; table, 764 (853) acres; 45,533 (43,361) acres were shown as being of bearing age.

**Grape Yield.**—The total yield of Grapes was 108,705 (105,424) tons; increase 3,281 tons, averaging per acre of bearing age, 2.39 (2.43) tons. The yield was utilised as follows:—For wine-making, 71,358 (62,495) tons; drying, 36,284 (41,773) tons; table and export, 1,063 (1,156) tons. The decrease in the drying tonnage was due to a fairly light Sultana crop, particularly in the River Murray district; also, to large quantities of other Raisins and Currant Grapes being sold for distillation wine.

## S.A. FRUITGROWERS' ANNUAL MEETING.

At the annual meeting of the South Australian Fruitgrowers' and Market Gardeners' Association, held on October 1, Mr. C. H. Ragless presided over a fair attendance.

The President's address referred to the death of the General-Secretary, Mr. Naughton, and expressed appreciation of the action of Mr. Jas. Donaldson and Mr. F. Staniford, M.P., for having carried on the work. Mr. W. J. Kimber was appointed General-Secretary.

The election of officers resulted as follows:—President, Mr. J. Turner; Vice-President, Mr. G. W. Summers; Committee, Messrs. J. B. Randell, J. Donaldson, H. Wicks, A. O. Petersen, H. B. Robson, C. W. Giles, C. H. Ragless, A. O. Pike, R. Hunter and F. C. Staniford, M.P.

The Association was pleased to learn from Professor Prescott, of the

'Phone Central 8479

# F. W. Vear

**Fruit Importer  
and Exporter**

COMMISSION AGENT

**49 WILLIAM ST.,  
MELBOURNE, VIC.**

Solicits consignments of APPLES, ORANGES, BANANAS, PINES and all other fruits.

Account sales with cheque daily.

Waite Research Institute, that investigations were being undertaken to ascertain the cause and cure for Tomato wilt.

## S.A. TOMATO GROWERS ORGANISING.

Mr. W. J. Kimber, who was recently appointed Secretary of the South Australian Fruitgrowers' and Market Gardeners' Association, writes that he is very busy organising the growers of glasshouse Tomatoes, which find their way to Melbourne in great quantities. "We have formed a Committee to discuss and agree on prices to be paid for half-cases. The distributors realise that we are now united fairly well, and if they act fairly to growers, all will be well."

## FIGHTING INSECT PESTS.

### Pear and Cherry Slug.

These destructive insects are usually plentiful during November and December on Pear and Cherry leaves, causing same to turn brown and to shrivel up.

Spray with arsenate of lead. Dust trees with lime, soot, dry sand, etc.

### Light-brown Apple Moth.

The green, active caterpillars of this destructive moth are becoming plentiful. They often attack young Apples, and later the Yate's Apples when ripening. Spray with arsenate of lead.

### Pear-leaf Blister Mite.

These mites are exceedingly numerous at the present time.

The work of this mite makes its presence easily distinguishable from all others. Pear leaves are so affected as to produce reddish or dark brown spots, which become darker with age and may spread so as to entirely cover and destroy the foliage. They also attack the fruit.

Spray with lime-sulphur. Destroy all fallen leaves.

### The Red Spider (Bryobia).

The young mites are red, becoming brown when fully developed. Owing to the dry weather they are very numerous on Apple and other fruit trees. The mites, in feeding, produce a fine yellow mottling effect upon the leaves, eventually causing them to turn yellow. Spray with nicotine-sulphate, or black-leaf 40. Thoroughly spray the underside of the leaves.

### The Holy or Cross Bug.

The name of the insect is given from the cross-like markings on the wing cases. They are usually to be found in Citrus orchards during November and December. They are provided with strong beaks which they insert into the young shoots of Orange, Lemon and other trees and suck up the sap, causing the twigs to become black and to die.

Spray with tar-impregnated water, phenyle spray or lime-sulphur. Spread sheet or old piece of blanket on the ground under the tree and shake tree; this causes the insects to drop. Then destroy same.

### Harlequin Bug.

The eggs of this plant bug are deposited amongst rubbish, under logs, stones and in decayed wood, etc. Like the holy or cross bugs, they are provided with strong beaks for sucking the sap from fruit trees, fruit, etc. At times they attack

Apples, causing brownish spots to develop.

Destroy all marsh-mallows. Keep all headlands free from weeds. Spray with tar water, phenyle or any of the nicotine sprays.

### Rutherglen Bug.

These insects have appeared in vast numbers in orchards. They are a small grey insect belonging to the so-called plant bugs. Like all other plant bugs, they suck the sap from fruits, flowers, etc., causing much damage.

Spray with benzole emulsion, tobacco water, phenyle or tar-water.

Experiments of trying to drive these insects from orchards by smudge fires have been very successful. When a gentle breeze is blowing, make smudge fires at intervals amongst the trees, and sprinkle a little sulphur on them. Should sulphur be used, fires must not be made too near the trees, otherwise foliage will be damaged.

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(GERMANY).

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APPLES.

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### Scale Insects.

The young of San Jose, olive or black, red, Apple mussel, and other scales are now moving. Spray with nicotine sulphate or black-leaf 40.

### Apple Root Borer.

The perfect insects of this most destructive pest of Apple and other fruit trees are very plentiful, especially on young Apple trees. Thoroughly spray trees with arsenate of lead. Some of the leading orchardists state that if the trees are sprayed on a fairly warm day many more insects are destroyed than if sprayed on a cold or cool day.

### Woolly Aphis Parasite (Aphelinus).

The parasites are now hatching, and orchardists should distribute the parasitised aphids amongst trees affected by the woolly aphids. Twigs containing the parasites can be obtained from the local Orchard Supervisors.



# CONTROL OF CODLIN MOTH

Results of Some Experiments Carried Out at the Blackwood Experimental Orchard, South Australia.  
(A Lecture delivered by R. Fowler, Manager Blackwood Experimental Orchard.)

Experiments show the value of trapping Codlin Moths to reduce infestation, and to indicate the best times for spraying. Without reliable data, spraying is haphazard and wasteful.

Spreaders give more even distribution of poison. Bandaging trees is useful but dangerous, unless cloths examined weekly. Bandaging is best done late in season to destroy over-wintering grubs.

IT IS NOW an almost universal complaint that Codlin Moth is much worse than formerly, and that measures which in past seasons proved reasonably effective are not so now. Growers have blamed the spray material, or even suggested that there has gradually been built up a strain of Codlin Moth that, to some extent has become arsenical-poison proof.

Whilst not admitting that the above suggestions are correct, it is a fact that Codlin Moth has got somewhat out of control; in this, our experience is exactly the same as developed in America some years ago, which led the Bureau of Entomology of the U.S.A. Department of Agriculture to establish a field station for the purpose of making a careful study of the life history of the Codlin Moth; the result was Departmental Bulletin No. 1235, which covers a very wide field of investigation, and throws considerable light on the life history of this insect under their conditions. However, the same conditions do not prevail here, as in the Yakima Valley of the State of Washington, and though the mass of information compiled by the American Entomologists (Messrs. E. J. Newomer and W. D. Whitcomb, is of great assistance, it emphasises the necessity for a more detailed investigation, under our own conditions, into the life of Codlin Moth, the most serious insect pest of the Apple grower. This, in my opinion, is a matter for the Commonwealth Scientific Research Council.

It is estimated in America that a loss of at least 20 per cent. of the total crop is due to the depredations of this insect, and, on the same basis, this would represent in South Australia alone, a loss of approximately 200,000 bushels, and over the whole of Australia a loss of perhaps three or four times as many bushels, so it is very evident that any steps taken that will reduce this great loss will greatly benefit the Apple industry.

## The Life History of the Codlin Moth.

We are apt sometimes, whilst thinking of a subject in a general way, to overlook seemingly minor details, which are generally of great importance.

The best known form is the larva or grub; this is the only stage in which the Codlin Moth injures the fruit, and it is the stage in which it can most readily be attacked. The full grown grub is pink or white, about  $\frac{1}{2}$  in. long, with a black head. The grub hatches from a pearly white egg, about the size of a pin head. These eggs can readily be seen on the fruit later in the season, and will glisten, as it were, on skin of the fruit if held against the light. I have seen as many as five or six on one fruit; they are sometimes to be also seen on the leaves, though then they are harder to detect. From American investigations, it seems the eggs are extremely sensitive to temperature. High temperature will hatch the grubs in five days, and cool weather will retard the incubation, the period varying from five days to 23 days, with an average of 10 days. Whether these periods apply here I do not know, and that is a point on which we require definite information, because it has an important bearing on control by spraying. A few days after the egg is laid, a reddish ring or germ band becomes apparent, and just before the worm hatches its litter, black

heads become visible. The young grub, when hatched, is barely  $\frac{1}{16}$  in. in length. It does not appear to ever enter the fruit beneath the shell of the egg, but crawls rapidly about until it finds a suitable place to enter the fruit. The first brood appears to favor the calyx, or its vicinity, but later grubs will often enter directly into the side of the fruit, and particularly where fruits touch each other. We are told that it takes the little grub about  $1\frac{1}{2}$  hours to eat its way through the skin, and that it remains just beneath the skin, near the surface, for a few days before burrowing into the centre of the fruit to feed on the pips. American investigations state the average length of the feeding period is 23.82 days, with a maximum of 33 and a minimum of 18. This may vary under our conditions.

When fully grown, the grub burrows its way out of the fruit to find a place to spin its cocoon, which is woven of white silken threads, with which pieces of bark, wood, and leaves are often mixed. This operation in America takes four to six days. The grub then changes into the pupal stage, and the moth emerges after about 13.91 days, with a maximum of 44 days and a minimum of nine. The moths start to lay eggs within two or three days of emergence, each female laying an average of 23.39 eggs. The average life of the female moth is 13.09 days, and the male 13.97 days, with a maximum of 37 days for female, and 45 for male moths. Apparently, according to the U.S.A. Bulletin, these figures vary with the different broods, again demonstrating the necessity for definite research work.

From the above figures we get the following life cycle:

|                             |           |
|-----------------------------|-----------|
| Incubation period . . . . . | 5.10 days |
| Feeding period . . . . .    | 18.20 "   |
| Cocooning period . . . . .  | 5.6 "     |
| Pupal period . . . . .      | 12.14 "   |

Whole life cycle, 44-50 days, maximum 67, and minimum, 32 days.

As we have no definite data under local conditions, it is impossible to compare figures, but, from my own observations, I should say there are variations.

Examining bandages every seven days, it is noticed that even in that space of time it was possible to find pupa cases from which the moths had emerged, and we know it would not be wise under our conditions to leave the bands on the trees, without examining them, for more than eight or nine day periods, so that unless the larvae take some time to reach the bandages, the cocooning and pupating period must be much shorter with us than in America. Then, we have the question of the number of broods, a point difficult to determine, owing to the overlapping of one brood with another. The wintering grubs include all the last brood of grubs, and a portion of the second brood, but more of the former than of the latter.

As it is from the wintering grubs that the next year's infestation will come, the necessity for destroying them by every possible means becomes apparent.

Temperature plays a most important part in the life cycle of the Codlin Moth, as it directly affects the time taken for the eggs to hatch, the number of eggs laid, and the cocooning and pupation periods, so that with a

long, dry summer (like last season) the difficulty of controlling the Codlin Moth was increased very considerably, and that, in spite of our efforts, considerable losses resulted.

#### Methods of Control.

Our present methods of control consist of:—

- (1) Pruning and training the tree so that the fruit will be carried in such a position that it can be really seen, thinned, and sprayed.
- (2) Spraying with arsenate of lead.
- (3) Banding the trees.
- (4) Thinning the fruit.

As this is not a paper on present methods of control, I will not enlarge on this aspect. The experiments under review, these were carried out for the purpose of determining:—

- (1) What results might be expected from trapping Codlin Moths by baits or lures, whether spraying with arsenic after the Apples have attained considerable development may be dispensed with.
- (2) Whether spreaders made the arsenate spray more effective, or
- (3) Whether a stronger spray than that recommended by the manufacturers will give better results.

The trapping of Codlin Moths by lures is not new; the results some years ago did not justify the time and expense involved, but recently the matter has been brought into prominence, owing to the results obtained by two American entomologists, and also by suggestions from Dr. Tillyard, of the Cawthron Institute of Research, in New Zealand. Experiments suggest possible achievements in this direction, so the following experiments were started here. Unfortunately, the records are not complete, as the season was advanced before the tests were started. As the data collected last season proved very interesting, it is intended to repeat the experiments, and, if possible, to improve on them.

#### The Experiments.

Ordinary 2lb. glass jars were used, and to the neck of each a wire loop was fixed so that they could be easily hung in the trees and removed for examination. The solutions used in the bottles were:—

- (1) 50 per cent. solution of fermented Apple juice.
- (2) 25 per cent. solution of ordinary commercial vinegar.

The fermented Apple juice was the product of rotten Apples, and was obtained by simply throwing the fruit into a perforated tin and collecting the juice in a barrel. The vinegar used was the ordinary dark vinegar from the local storekeeper.

The jars were three-parts filled with liquid, and hung in the trees in approximately the middle portion, and on the most shaded side to reduce evaporation. Examinations were made at first every few days, but later, once a week; after each weekly inspection the bottles were re-filled. Generally speaking, a refill once a week was found sufficient in the case of bottle traps. The jars were kept practically in the same block of four rows of Apple trees in the variety plot, being hung in alternate rows four trees apart in the rows, although this spacing was not rigidly adhered to because some varieties were not carrying fruit.

At each examination the moths trapped were removed and counted, a record being made of the sexes. A number of female moths were examined, and these were mostly found to contain eggs. As no benefit could be derived if only male moths were trapped (as has happened with other insects), or if females were caught after egg laying, the necessity for the above data must be apparent.

In addition, a record was also kept of the light brown

Apple Moths and other insects caught.

The tests were started on November 18th, too late to catch the very early moths of the spring brood, which had probably been on the wing a month previously, but there was a considerable catch on the first examination; the numbers ran to a maximum on December 11th, falling off again for a few weeks, and then rising again late in January. I have illustrated this by means of a graph. The total catch in the eight bottles was 1,123 moths, 725 in the Apple solution, and 398 in the vinegar solution.

It was found that the flight of moths was controlled by temperature—that on cool or wet nights few were trapped, but after hot days or on close, muggy nights generally more were trapped.

The most important factor would appear to be, however, the dates of the emergence of the moths of each brood, and from this point of view the information gained may prove valuable.

Studying the graph, it will be noticed that the first maximum catch was between December 4th and 11th—133 moths in the four jars. Most Apple trees bloom from the middle to the end of October, and taking it that the eggs of the spring brood of moths, i.e., the moths from the over-wintering grubs, lay their eggs then, this period, say, from October 26th to December 11th, represents the life cycle of the first brood, and a period of approximately 45 days, which coincides with the American figures.

Then comes a considerable falling off in the numbers caught from December 11th to January 30th, with another maximum period between January 30th and February 3rd (161 moths from the four jars). From December 11th to February 3rd is a period of 54 days, and after allowing for the oviposition or laying period of the first brood of moths, we again have a period of time corresponding with a life cycle of the moth, and from February 3rd the numbers fell rapidly, and there is then no further rise.

The graph, therefore, seems to prove that in South Australia we have only two definite broods of Codlin Moths, though, at certain times, all stages are present owing to the overlapping of generations.

Now, study the graph from the point of view of spraying control methods, as thus it is most instructive. As you know, we spray:—

First, when most of the flower petals have fallen.

Second, a fortnight or three weeks later.

Third, three weeks or so later.

Fourth, sometime in January when young grubs are noticed.

Following this schedule at the Government Orchard, and comparing it with the data shown on the graph, we find that whilst our first and second sprays should have been effective, our third and fourth had

not a reasonable chance,

as they were just too late. Our third spray was started on December 16th, and the maximum flight of moths was between the 4th and 11th. Allowing an incubation period of five days, most of the young grubs from these moths had five or six days' start on the spray. Again, the fourth spray was applied on February 10th, and the second maximum flight of moths was between January 30th and February 3rd, again giving the young grubs an effective start of six days.

It must not be inferred that our third and fourth sprays were wasted, because there are moths emerging at all times through the season, but it would seem that we missed the chance of controlling the moth when the maximum number of eggs was laid.

It would seem from this experiment that if we wish to fix our spray schedule correctly, and not work in a hap-



hazard manner, some indications as to when the maximum number of moths of each brood emerge is necessary, and the trapping of the moths seems to suggest a manner in which this may be done.

Regarding the other aspect of trapping, i.e., the probable effect in reducing the number of grubs and subsequent loss through Codlin infected Apples, this is dealt with in another experiment, details of which appear in Table 3.

Further points that require attention in connection with this experiment are:—

- (a) The most economical number of traps to employ per acre; and
- (b) The time of the day or night when most moths are caught.

We have maximum and minimum temperature records at the Experimental Orchard, which cover the whole of the day and night. It is the temperature between, say, 6 p.m. and 9 p.m., that is the controlling factor, as it is during that time that the moths are most active.

The **Light Brown Apple Moth** is also very destructive, doing similar damage to the Codlin, but of these we only caught about 100, so that they are probably not anything like so numerous as the Codlin. Only a few other insects were trapped—Hawk Moths, Butterflies, and Vinegar Flies, and a few beneficial insects, Ladybirds, and Lacewings, which feed on aphides and young scales.

Table 2 gives the data from a trapping test, using jam tins instead of bottles. The tins were found to be much more difficult to attend to, because of the greater evaporation and leakage. Four rows of 12 trees of Cleopatra Apples were used, a trap being placed in each tree in rows 1, 2, and 3, and not any in 4. These rows were also used for spraying tests. The average mean catch per tin with Apple juice was, roughly, three, and with vinegar one in this test, whilst with the glass jars it was nine and five respectively. This would seem to indicate that the moths are lured for some distance, and that it is not necessary to place a trap in each tree. This is further demonstrated by another small test, in which one tin was used for 16 trees, the average per tin in this case being eight.

Altogether, a total of 3,092 moths were trapped in eight jars and 39 tins. The inference is that the number would probably have been much greater, if all the traps had been baited with Apple solution instead of vinegar.

When it is borne in mind that approximately half of these moths were females, it may safely be stated that the experiments are well worth repeating.

#### Spraying Tests for Codlin Moth.

In this experiment the same four rows of Cleopatra Apple trees were used, as we have no other block of trees of one variety on which an experiment of this kind can be carried out. Though possibly these two might interfere with one another, they provide interesting results.

Row 1 was sprayed four times with arsenate of lead paste, 5 lbs. to 100 galls., and to this was added 12 ozs. of calcium caseinate spreader. Row 2 was sprayed four times with the same strength of spray, but no spreader. Row 3, sprayed four times with 7½ lbs. paste to 100 galls., with 12 ozs. calcium Caseinate; and row 4, sprayed with 7½ lbs. arsenate paste, but without spreader. Rows 1, 2, and 3 also had Codlin traps in each tree.

Column 1 gives the total crop from each tree, including windfalls. Column 2, the total weight of Codlin Apples; and column 3, the number of moths trapped in each tree.

A study of the figures reveals that row 4, sprayed with 7½ lbs. arsenate paste to 100 galls., without spreader, gave the lowest percentage of Codlin Moth, 23.27 per cent. by weight, though no moths were trapped in this

row. This row is only an unmanured row, and the fruits generally were much smaller than in the other rows, although the total crop is not much less in weight. Row 3, sprayed with the same strength spray, with spreader added, gave a slightly increased quantity of Codlin infested fruits, and this, in spite of the fact that an average of 26 moths were trapped in each tree. Then comes row 3, with the weaker spray, 5 lbs. paste to the 100 galls., and no spreader, 35.75 per cent. by weight, with an average catch of 49 moths per tree; and last, row 4, with the weaker spray, plus the spreader, 41.39 per cent., with an average catch of 58 months per tree.

It would seem, then, from these figures, that the percentage of Codlin Apples per tree bears no relation to the percentage of Codlin Moths caught per tree, so that the trapping of the moths has not reduced the quantity of Codlin fruit on the particular trees in which the moths were trapped. This result is hardly what we expected, and I am unable to give a satisfactory reason for it. It may be due, in a measure, to the fact that rows 1 and 2 carried the heaviest crop, with more numerous bunches of fruit, and it invariably happens that the Codlin Moth spoils more of the fruit when the Apples are bunched.

The percentage of Codlin shown by the figures is relatively high, but these figures represent a very accurate record, and include every fruit produced, windfalls, of course, included, and all fruits showing signs of Codlin "stings" were recorded as Codlin Apples.

The real object of this experiment was to demonstrate whether the use of spreaders and increased quantities of arsenate gave more efficient control.

As you are all aware, both these practices have been strongly advocated by some growers, and these tests were carried out with the idea of getting reliable data. As many influences which may affect results are present, the results of one year's work cannot be taken as conclusive. The experiments must be repeated a number of times before definite conclusions can be arrived at, but from the figures before us it would seem that the increased strength has given increased efficiency, but that the use of the spreader has given no direct beneficial results in the control of Codlin Moth.

#### The Value of a Spreader.

The spreader used was calcium caseinate. This material is somewhat hard to mix. The method adopted was to mix the desired amount into a thin paste, then dilute with more water, allowing the mixture to stand for a few hours before using. Another method is to wash it through the sieve while the tank is being filled.

The use of spreaders in Codlin Moth spraying is relatively new, and there is much to be learned in regard to them. Judging superficially, apart from the figures quoted above, it appears to spread the spray material more evenly over the fruit, preventing the formation of large drops with areas between the drops partially unprotected. It is a mistake to think the spreader will cause the spray to spread round the opposite side of the fruit; both sides must be sprayed. The spreader eliminates the conspicuous white blotches that usually appear on fruit sprayed with arsenate only, making the appearance of the fruit objectionable, particularly in the case of colored Apples, and also since the recent arsenic-on-Apples scare. Chemical analysis in America has shown that there is as much poison on an Apple when a spreader has been used as when it has not. The difference is that the poison is more evenly distributed.

It has been possible in the past to control the Codlin just as thoroughly without a spreader as with it. I think, however, it appears to be easier to give the fruit a complete coat of poison if a suitable spreader is included in the spray.

In addition to the data collected in the experiments of the past season, it is proposed next year to bandage the trees as well as keep a record of the number of grubs caught throughout the year.

In Table IV. results of somewhat similar experiments are given, but in this instance arsenate powder was used, and also some arsenate dusting powder. As it was carried out in a variety block of trees, some carrying good crops and some very light, and ripening at various times, it was not practicable, as in the other experiments, to get crop records, but was just an attempt at testing, in an empirical manner, the same point as in the previous experiment. On these trees, bandages were placed and examined at approximately fortnightly intervals, until the middle of March, and then examined finally when all fruits had been cleaned up. The columns show the number of grubs caught at each examination.

The figures do not, I think, give any clear information on the points at issue. In the rows where double the quantity of arsenate powder was used we have a higher percentage of grubs per tree than in the rows on which the ordinary strength spray was used, 32 average against 28 average, but, of course, the absence of records of the respective yields of fruit nullify the issue. Where spreader was used with the ordinary strength spray, a higher percentage of grubs per tree than where no spreader was used, 42 average against 28. Where arsenate powder dust was applied an average of 32 per tree was secured.

Although, from the point of view from which the experiment was carried out, these figures prove nothing, there is something, to my mind, they do prove, and that is that a considerable number of grubs manage to escape the poison. You will see from the table that altogether 10,990 grubs were caught from approximately 320 trees,

and, no doubt, this represents only a small portion of the grubs that actually escaped being poisoned. Thus, though we carried out the regulation sprays at the times recommended, something more is needed to control the moth. Bandage traps would be a considerable help, but they can also be a danger; unless the grower can be sure that they will be regularly examined, and all grubs destroyed, I think he would be wise to leave them off, or at least apply them late in the season, with the main object of catching the over-wintering grubs, and thus reduce the probable infestation the following season.

With regard to

#### the dusting experiment,

the dusting machine, a "Niagara," hand machine, was not available until after the first spraying had been done, and although dust was applied on three occasions, great difficulty was experienced in evenly distributing it, and that will be, I think, one of the greatest drawbacks to its general use. Liquid sprays can be applied even if there is a certain amount of wind blowing, but dusting cannot be successfully applied under those conditions, and whilst waiting for the necessary calm day the time for doing the job has, perhaps, passed. Perhaps for anyone wishing to work night and day, dusting would prove a useful practice. We are hopeful of carrying out more definite tests this coming season, and have already done some work in this direction in the control of curl leaf in Peaches.

This address is not on present methods of Codlin Moth control. My object has been to demonstrate other measures of control which might assist us, and to show you that at the Experimental Orchard at Blackwood we are prepared to carry out any tests that might assist the fruitgrower, and that we are endeavouring to do so. I trust that you will deem the subject of sufficient importance to justify the time I have given to it.

[The graph referred to in this article will be published in our next issue.—Ed. "F.W."]

### COMBATING CODLIN MOTH.

#### Another Reminder to Apple and Pear Growers.

IN fighting the codlin moth, the first objective is to reduce the carry-over grub, and the next is to prevent those that escape from increasing by producing a second generation (states the N.S.W. Department of Agriculture). Often in the early part of the season the infestation appears negligible; then some time after Christmas there comes a wave which nothing seems to stop. The secret is that the apparently negligible initial infestation has been allowed to run into a second generation and the increase is astounding.

#### Five Methods of Defence.

There are five methods of defence, namely:—

1. Frequent applications of spray.
2. Hand picking.—As soon as the tiny grubs start to eat their way in, make a systematic search through the trees, picking off all attacked fruit and boiling it to destroy the grubs. The grub is thus got while it is still in the fruit and the catch is certain, whereas a grub that is allowed to eat its way through the fruit may or may not be caught in the bandage.

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This method is one of the quickest to show results in cleaning up a badly-infested orchard. It is gratifying to note that the practice of hand-picking is increasing among growers.

3. Bandaging.—Some grubs will escape both the spray and hand picking, and by placing a convenient hiding place, such as a bandage, on the butt of the tree many of the grubs can thereby be caught and thus prevented from producing a second generation. Examine bandages fre-

quently and dip in boiling water to kill larvae.

4. Collecting and boiling all infested fallen fruit at frequent intervals.

5. Lastly, precautions against outside infestation.—To spend money on moth control and then to carry grubs from elsewhere to the orchard seems utter madness, and yet it is being done every season by medium of second-hand and return cases. No used cases should be allowed in the orchard unless they have been previously dipped, or are dipped at once on arrival at the orchard. The case must remain under boiling water at least three minutes to allow the water to penetrate to tight joints that may be concealing grubs.

**Vitamite and Qua-sul.**—Messrs. Lincoln and Blunt, Manufacturers of "Vitamite" and "Qua-sul," advise that their South Australian distributors are Messrs. Geo. Selth and McRae Ltd., Grenfell-street, Adelaide. Vitamite is a nitrogen producer for increasing soil fertility; "Qua-sul" is a soluble sulphur-carbon compound for checking black spot, mildew, Tomato blight, downy mildew, leaf curl, and other fungus diseases.



## New South Wales.

Future of the Advisory Board :: Plantings on the M.I.A.  
A.W.U. Claim

### N.S.W. STATE FRUIT ADVISORY BOARD.

At a meeting of the N.S.W. State Fruit Advisory Board, held on October 21, the future of the Board was discussed. The President (Mr. Heane) stated that he had advised the Minister for Agriculture that both the Advisory Board and the Fruitgrowers' Federation could not continue, and he recommended that the Board be disbanded, official recognition being given to the Federation.

Mr. N. H. Case opposed the abolition of the Advisory Board, and it was finally decided that the Board should continue until a representative elective body could take its place, the financing of the Board not to be a charge on the Orchard Registration Fund; that the Minister be recommended to give the same status to the present Board of Management of the Fruitgrowers' Federation as is now given to the N.S.W. State Fruit Advisory Board, and that the Federation be financed from the Orchard Registration Fund to carry on until the new Board of Management is

elected under the revised constitution, the Advisory Board to then be disbanded.

The new constitution adopted by the Federation provides for the organisation of all persons engaged in the fruitgrowing industry into district organisations (companies, associations, fruitgrowing branches of the Agricultural Bureau, co-operatives, etc., with membership principally of bona-fide fruitgrowers), revenue to be collected from orchard registration fees, every registered grower having a voice in determining the policy of the Federation, and in electing those appointed to carry out such policy.

Six district councils are to be comprised of delegates from local Associations, each district council to elect ten delegates to the annual general conference. There shall be eight sectional committees, elected by the conference annually—(1) Citrus; (2) Pome; (3) stone; (4) Grapes; (5) Bananas; (6) dried; (7) Cherries and berries; and (8) co-operative. From these sectional committees the general conference shall elect a Board of 12 members on the following basis:—

Three from the Citrus section, two each from Pome and Grape sections, and one each from the others. The conference shall also elect a President and two Vice-Presidents, and the State Fruit Expert shall be a member of the Board.

The constitution also defines the purposes for which funds may be expended—maintenance of registered office of the Federation and payment of officers; organisation and improvement of marketing conditions and opening up of new markets; expenses of meetings and annual conference; "any other manner that the Federation may deem best calculated to develop or protect the fruitgrowing industry." A deputation was appointed to place the proposal before the Minister.

### ORCHARD EMPLOYEES' WAGE DEMAND.

Orchard employees in New South Wales, have lodged a claim with the conciliation committee for higher wages. Foremen in charge of vineyards and orchards seek £8, propagators, £7/12/-; gangers, £7; pruners, £6/10/-; budders, planters, grafters, pullers out, ploughmen and horse drivers, £6/6/-; shaft sinkers, spray mixers, barrowmen and spreaders, £6/10/- packers, graders, sorters and pickers, £6/6/-; aged 15 to 17, £5/10/- hours, 44 per week; housing to be provided.

At a big meeting held at Griffith, on November 10, it was unanimously decided to find the claims of the A.W.U. in respect to wages, hours and conditions of employment on orchards.

### REBATES ON FRUIT CASES.

#### To be Discontinued.

Advices from Sydney recently stated that the agents there had decided to discontinue the system of case rebates to growers on the M.I.A., as from November 1. Only new cases are allowed to be used on the Area, at a cost of 1/10 each, and if the refund of 1/- per case is discontinued, growers estimate their loss at thousands of pounds.

### WOOLLY APHIS PARASITES.

It has been reported from New South Wales that efforts to distribute the woolly aphis parasite (*Aphelinus mali*) have been partly frustrated by the Common Orange and black ladybird, which not only eats up the woolly aphis, but also the parasitic larvae.

It has been found necessary to cover the branches of experimental trees with hessian bags to enable the parasites to increase.

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## FURTHER PLANTINGS ON THE M.I.A.

### Recommendations by Committee.

A meeting of the M.I. Areas Planting Committee, constituted some years ago to watch the development of the fruit industry and inform growers of the Committee's views generally thereon, was held at Griffith on the 26th October, Mr. W. J. Allen, of the Department of Agriculture, presiding; other members present being Messrs. J. Thompson and F. Helson, representing the Mirrool and Yanco Settlers, respectively, and Mr. S. Braithwaite, District Inspector and Nursery Manager.

### Future Horticultural Plantings.

After general discussion, the Committee commented as follows on the

further plantings of intermediate varieties of Peaches were advisable.

The Committee decided to fully endorse the proposal for a resident entomologist on the Areas, and to recommend that next year the Entomological Department should carry out experiments for the control of both Peach Aphid and Thrips.

**Apricots.**—The previous recommendation that no further plantings of Apricots were required was endorsed.

With regard to the export of dried Apricots, it was pointed out that recent restrictions had been placed on the quantity of sulphur contained in dried Apricots for export, and the Committee decided to recommend that the Commission ascertain the reason for the restriction, and make the information available to settlers. The Chairman stated that it was proposed to carry out tests to ascertain the quantity of sulphur to be used in the treating of the fruit, in order that the total sulphur content of the dried product would not exceed the amount allowable for export, particularly to Great Britain.

**Pears.**—There was still room for the planting of both Packham's and Williams' Pears; Winter Cole variety had proved to be a good polliniser.

It was pointed out that no plantings should be made in soils of a less depth than five or six inches of loam.

**Grape Vines.**—The Committee thought it safe for further plantings of Wine Grapes to be made, particularly Black Shiraz, Hunter River Reislings, Frontignac and Grenache varieties, and Sultanas on good soils.

### Off-Type Oranges.

The proposals of the Irrigation Commission for assisting settlers to bud over off-type Navel Orange trees were considered very satisfactory, and would go a long way towards eliminating trees of the off-type provided that all settlers concerned co-operated with the administration in the matter.

All settlers who had off-type trees should communicate with the Commission immediately, so that early inspections could be made during the coming season.

It was decided, after discussion, to recommend that the names of local nurserymen contemplating the propagation of citrus be ascertained, and that they be advised of the necessity of using the utmost care in the selection of budding wood, and in keeping records of trees from which same was selected.

Apricot crops on the M.I.A. have been menaced by an attack of caterpillars.

## GRIFFITH SHOW.

The 8th Annual Show of the Griffith Agricultural Society was a great success, attended by large crowds. The Governor of N.S.W. (Sir Dudley de Chair) opened the Show, an outstanding feature of which was the ward exhibits. The Central Citrus Association's Championship Cup attracted three entries, the Gosford District Packing House, again carrying off first prize, with the Griffith Producers' Packing Shed second. There was a fine display of Citrus and dried fruits.

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various fruits suitable for further plantings:—

**Citrus Fruits.**—There appeared to be no reason at the present time to restrict further plantings of Washington Navel and Valencia Oranges on suitable well-drained soils, good surface drainage being particularly necessary.

**Peaches.**—Until some economical means of controlling Green Peach Aphid was found, no considerable

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## FRUITGROWERS' DISABILITIES.

The Metropolitan Section of the Victorian Fruit Council, has asked that a deputation be arranged to wait on the Minister for Agriculture, setting out the disadvantages that growers are laboring under in regard to insect pests, more especially the thrip, which has practically ruined the greater part of the coming season's crop.





### FUMIGATION OF CITRUS TREES.

THE FUMIGATION of Citrus trees being compulsory in Victoria, the following information from Mr. S. A. Cock, Government Citriculturist, will be of interest.

Experience here, as elsewhere, states Mr. Cock, indicates that fumigation is a proved remedy for scale on Citrus trees. The worst pest to contend with is the red scale.

The Government is increasing its outfits, and will have six of them operating this coming summer. Thirty sheets for tree coverings are included with each outfit. Two such 30-sheet outfits are operating at Mildura, two at Kerang, one in the Shepparton district, and one at Doncaster. Fumigation is usually performed from December to the beginning of June. The operations are conducted only when the temperature is above 50 degrees; when below this tempera-

ture, the procedure is dangerous.

Fumigation is done at night. The work cannot be done on windy nights, because the flapping of the sheets renders the work ineffective. The average would probably be five working nights per week. Last summer 40,000 trees were fumigated. It is expected that during the coming summer the Orange and Mandarin trees fumigated will total 60,000.

The sheets have measurements marked on them, and by the use of poles the tree can be completely covered; the measurements on the sheet indicate the number of cubic feet enclosed, and the operator supplies the dosage accordingly. The dosage is worked out according to a printed schedule. The operator is supplied with a book in which the name of the owner of the orchard is entered, also the row of trees and every tree in the row; thus a complete record is kept of the dosage supplied to each individual tree. These details

are kept at the Department of Agriculture for a year, in case of dispute.

The method of fumigation has improved since the days when the pot system was in vogue. The pot system included the use of potassium cyanide, sulphuric acid, and water, a rather cumbersome method as compared with the present system of applying calcium cyanide in the form of a dust. Because of having the equipment and gangs of trained men available, the Department of Agriculture is prepared to carry out the work of fumigation. However, where there are isolated Citrus growers, or where the owner prefers to do the work himself, the pot system can still be used. The dosage of this material is one ounce potassium cyanide, one fluid ounce sulphuric acid, to two fluid ounces of water. The quantity of sulphuric acid is added to the water in the pot or generator. The generator is placed under the covered tree, and the cyanide of potassium then added. The hydrocyanic acid gas is warm when thus generated. In the blower system the gas is cold.

In the modern system, the calcium cyanide dust is forced by means of a hose from a blower into the enclosed space, and immediately on release to the air, hydrocyanic acid gas is formed. The calcium cyanide dust is used at a strength of one ounce for every 100 cubic feet of enclosed space under the sheet. Up to 40 ounces would be used for a large tree, enclosing 4,000 cubic feet. Calcium cyanide is imported from Canada. This is the method of treating Oranges and Mandarins.

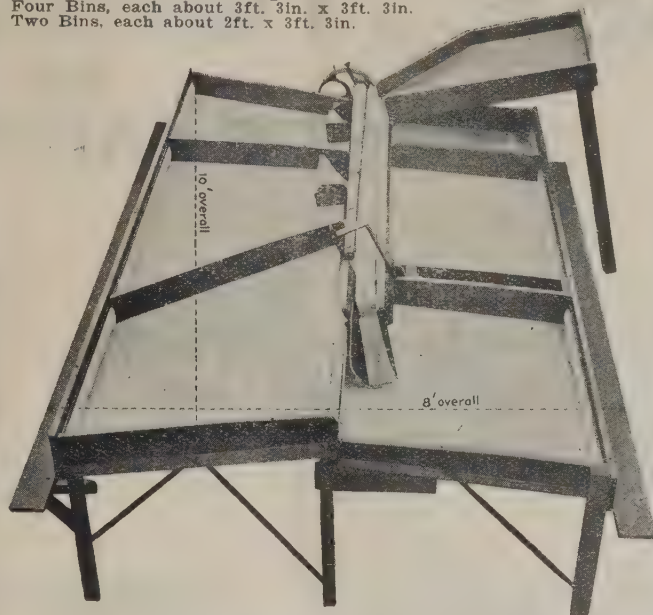
### Lemons.

For Lemons, the calcium cyanide is not used, as it is liable to cause burning, if there is a deposition of moisture either as dew or rain within 24 hours after fumigation. This makes the work precarious; therefore the Department recommends for Lemon trees the use of an anhydrous liquid, hydrocyanic gas. This is imported



Fumigating Citrus trees at Mildura. The figures in the foreground are (left) Mr. Underwood, Secretary Citrus Association; (centre) Mr. S. A. Cock (Government Citriculturist); (right) Mr. J. K. Muir, Citrus Supervisor, together with foreman and gang of five men.

Junior, "A Model" with Packing Bins attached.  
Four Bins, each about 3ft. 3in. x 3ft. 3in.  
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from South Africa. The containers are packed with sufficient lime to neutralise or take up all the gas generated in the case of accident.

The Department having the power of compulsion, the work of fumigation is supervised by the Citrus Supervisors in the districts. A census is taken of the groves and the number of trees. The grower then signs an authority for the Department's officers to proceed with the fumigation, indemnifying the Department against any liability for loss or damage, payment to be made on completion of the work. The average works out at about 2/2 per tree.

Continuing, Mr. Cock stated that so far the Department has experienced no trouble; the work has been done successfully, and the growers are anxious and willing for the fumigation to be attended to. Owing to the insistent demand for the increase of outfits, the Minister agreed, hence the addition of plants which will be in commission this year. In many instances growers were paying as much as £150 a year for scrubbing their fruit to free it from scale. They have, by fumigation, been able to save that amount of money for the last two years since fumigation be-

came compulsory, showing a nett gain to the grower.

Fumigation will not kill every insect; there is a percentage of kill varying from 90 to 100 per cent. Fumigation, in fact, places the grower in charge of the scale, whereas spraying with scalicides has the opposite effect, the scale being in charge of the grower. Some trees are so dense that the spray cannot penetrate, but by fumigation the hydrocyanic acid gas performs its deadly work.

The principal pest against which fumigation is used, is the red scale. For the olive scale, fumigation is effective from the first week in March, extending through April and May. This is the period when the main hatch of the young scale takes place in the grove. Where fumigation has

been attended to during these months, there has been no reinfestation for a period of two years, showing an absolute kill of all the scale.

Fumigation is most successful when the eggs have hatched, as it does not destroy the eggs. The Departmental Bulletin, No. 32, is being revised, and will shortly be re-issued, giving the latest information on the subject of fumigation in Victoria.

### FLORIDA CITRUS CROP LOSSES.

It is estimated that the recent tornado which swept through Florida has reduced the Citrus crop throughout the State by 15 per cent. This will cut the 1926-27 crop to about 14,500,000 boxes, or slightly less than the quantity of fruit marketed last season. The Grapefruit crop, under this estimate, says the "Florida Grower," will be fully 500,000 boxes short of the crop of last year, while the Orange crop will slightly exceed last season's production.

In some districts groves were uprooted; and packing houses destroyed or seriously damaged. Fruit that was not actually blown from the trees was bruised and thorn-pricked. The Satsuma Orange section in north-west Florida experienced high winds, but no crop damage was sustained.



GIBBS, BRIGHT & CO.—See Page IV



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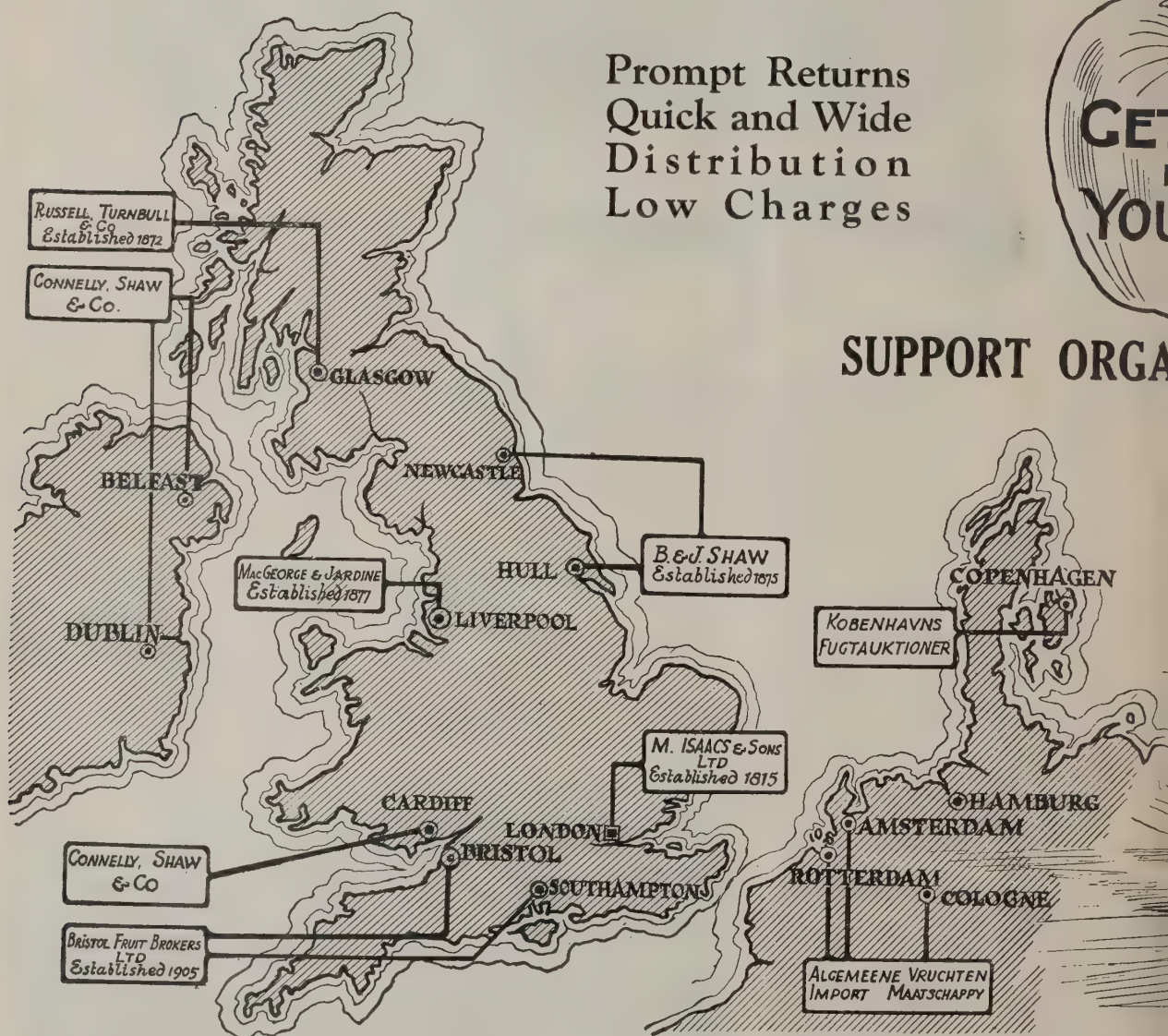
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## New Zealand.

### Fruit Control Criticized :: The Viticultural Industry

#### The Lesson of Dairy Control.

#### Why Experiment With Fruit?

A Nelson fruitgrower, under the nom de plume of "Pip," writes:—

"At last we know our fate! The poor old fruitgrower, after many years' search for a new earth and a new heaven in the way of organisation is to be brought under the iron heel of compulsory control. His lawfully owned property is to be taken from him willy-nilly, and disposed of by the powers that be, whensoever, wheresoever, and through whatsoever broker they choose to appoint. A bureaucracy in Wellington (mainly Government nominees and officials) and a dictator in London will crack the whip, and woe betide the dog that barks! The time will come, and at no distant date, when the victims will wake up and want to know how came it that this Bolshevik iniquity was put over them in a land flying the Union Jack.

"The Act got on to the Statute Book by misrepresentation. It was stated by some of the promoters that there need be no fear of the compulsory powers being enforced, and on that understanding many votes were won.

"Already this control fetish has wrecked the various fruitgrowers' organisations in the province, particularly the Provincial Council, which before the advent of control did such excellent work for Nelson growers. Worse still, the seed of dissension has been sown. In a time of stress like the present, when growers should be united, the camp is divided into two factions—the Compulsionists and the 'Antis.'

"In view of the disaster which has overtaken the dairy farmers, one had a right to expect the Fruit Control Board to adopt a policy of extreme caution; and at least to wait and see if it is possible for the Dairy Controllers to bring their ship out of the troubled waters it is in.

"But perhaps the Fruit Control Board are in blissful ignorance of the fact that many dairy farmers have been ruined; that all have been hard hit; that the finance of the country has been jeopardised, thanks to what the late Prime Minister referred to as a 'new experiment.' If Colonel Gray (Chairman of the Fruit Control

Board) will look up the current issue of the 'New Zealand Dairyman' he will find these facts reported:—

"On 21st August New Zealand and Danish prices stood both at 176/- per cwt. Since this date New Zealand dropped to 146/- (or 30/- per cwt.), while Danish actually rose to 184/- (?) showing a difference of 38/- per cwt. in favour of Danish butter. During the last four weeks New Zealand butter on the London market shows a drop of 10/- per cwt.; Danish butter during the same period declined only by 2/-. Argentine did not decline at all, but stands at the same figure as on 18th September, and at 150/- to 156/-—actually selling 4/- above New Zealand—a thing never heard of in the past."

"The plain fact is that the Dairy Control Board did with butter what the Fruit Control Board now propose to do with Apples—butted into that very delicate and extremely sensitive piece of mechanism—The Market—with the result that the operators of that machine were antagonised and retaliated by boycotting New Zealand butter and procuring their supplies elsewhere. What else could have been expected?

"After years of hard work and well-directed enterprise, New Zealand butter achieved a position on the open market, second to none in the world. Unfortunately, the industry has got into the hands of experimentalists, and so far from being raised to a higher level it has been ruthlessly cast down to the level of its meanest competitor. No wonder a wave of protest and indignation has swept over the country, and that the abolition of the Control Board is demanded. Perhaps it is fortunate that Mr. Coates happens to be in London at the present time. It will be strange indeed if 'something' doesn't happen very soon as a result of his investigations.

"Now, in view of the utter collapse of the vicious principle of compulsory control it does seem a positively amazing fact that the Don Quixotes of the Fruit Control Board have decided also to have a tilt at 'The Market.'

"Invested as they are with full power to commandeer our export fruit, to mortgage and do what they jolly well please with it, it should not

be forgotten that the members of the Board incur no liability, no matter what sort of a mess they make of the job.

"Grip this: New Zealand Apples to-day top the Home market by a comfortable margin. Colonel Gray confirms this. What then is there to gain by the proposed experiment? Are we likely to reach a still higher level on the market? I doubt if even the most optimistic members of the Board would suggest that.

"On the other hand it makes one shudder to think what we shall lose if the experiment fails, as fail it must. Many of us have put the best years of our lives, and our little all into the game. We have toiled and moiled, have suffered hardships while others prospered, but like the optimists we are we have been buoyed up with the hope which, like the glimmering taper's light, adorns and cheers the way. There has been the comfort of the solid fact that we were producing something for which there is a world's demand; that sooner or later things would right themselves; and at last we have the satisfaction of knowing that by slow degrees, by more and more our product has reached the highest position on the world's market. Can we afford to experiment? Is it prudent, with nothing to gain, to relinquish the substance for the shadow?

"I have been a fruitgrower for a good many years, and have been bitten by the numerous fancy schemes launched for our salvation, but this 'extra fancy' scheme is, to my mind, the saddest and maddest of them all."

#### VITICULTURE AND WINE-MAKING IN NEW ZEALAND.

THE ANNUAL REPORT of the Horticulture Division for 1925-26 gives the following summarised information regarding the progress of viticulture and wine-making in the Dominion, says the 'N.Z. Journal of Agriculture' for October:—

The planting of vineyards, both in table and wine Grapes, is steadily increasing. The season of 1925-26 was not favorable to the development of certain varieties of outdoor-grown table Grapes, owing to the unsuitable weather conditions prevailing during the setting-period. The prices realised on the markets were, however, satisfactory to growers, especially in regard to the Albany Surprise variety.

The group of wine Grapes equalled that of the previous year. In some localities where the weather was hardly warm enough during the ripening-period the sugar content of the grape-juice was low. Generally

speaking, the vines were free of disease; this was particularly noticeable in the Hawke's Bay District, which experienced a particularly dry season. The quantity of Grape-wine produced in the Dominion was approximately the same as last year—85,000 gallons, valued at £34,000.

The co-operative vine-testing plots established in 1922 at Nelson and Te Mata are making satisfactory progress. In connection with the Nelson plot, the results obtained so far indicate the possibility of ripening Grapes successfully outdoors in that district. Grape-growing under glass is gradually extending. The high prices ruling for glass and other materials during the past few years practically prohibited the erection of glasshouses. A gradual reduction in prices, has, however, enabled development to take place, and several new vineries have recently been built. There is a good demand for hothouse-grown Grapes, and the returns have been satisfactory.

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### N.Z. GOVERNMENT EXPORT GUARANTEE.

The New Zealand Government has decided to provide a guarantee to fruitgrowers for the coming season's exported fruit up to 10/6 a case for expenses involved in packing and marketing. Last season's guarantee provided for a penny per lb. profit to the grower on exported fruit. Last season's claims have not yet been assessed, but it is expected that the Government's liability under the guarantee will approach £90,000, as the season was very unsatisfactory,

### COOL STORAGE CHARGES IN N.Z.

It has been reported from Australia that cool store charges on fruit are more reasonable than those in New Zealand. A service which costs 1/- to 1/6 in Australia costs the New Zealand grower 2/- to 2/6. Here is matter for investigation, with a view to further cutting down overhead costs. And while the investigation is on, it might go the length of looking into cool store methods, which are not uniformly satisfactory.—"N.Z. Fruitgrower and Apiarist."

### HAWKES' BAY, N.Z.

A meeting of Hawke's Bay fruit-growers held during October, passed a resolution strongly protesting against the admission of considerable quantities of Canadian Apples to New Zealand, while local fruit was still in cool store. It was also urged that investigations should be made into the cause of flesh collapse of Apples in cool storage.

A slight outbreak of fireblight has occurred in some orchards in the Havelock North district of New Zealand, but is stated to be well under control.

### ORGANISATION IN SOUTH AFRICA.

#### Activity of Growers' Co-operative Associations.

According to advices from South Africa, the "control" of the fruit industry appears to have been retained by the growers' own organisations. The system of semi-Government Control Boards, as provided in recent different Acts of Parliament, caused much dissension amongst growers. Both citrus and deciduous fruit growers were dissatisfied with the "Control Board."

The "Cape Times" now states that the two industries mentioned have, through their own co-operative exchanges, effected a new arrangement.

Under this reorganisation the separate citrus and deciduous exchanges will have entire and exclusive control of the affairs of their own industries, and the Federal Board will deal only with such matters as are referred to it by the other two exchanges.

The new arrangement further provides that the deciduous and citrus exchanges have control of the levies raised from their own industries. This it is felt, will do away with the dissatisfaction that has been expressed in this respect in the past,

### SOUTH AFRICAN FRUIT PROSPECTS GOOD.

Mr. R. J. Bulmer, late Chief Inspector of Fruit for the Union, has visited most of the fruit-growing areas of the Western districts. He speaks enthusiastically of the prospects of the coming season, says the S.A. "Fruit Journal."

"At the present moment," he said, "stone fruit promise a record crop. The Apricot crop at Wellington is the best the growers have had for years. On some farms the trees are loaded with fruit and much thinning will be necessary. If the growers do not resort to the thinning process the probability is that the crop will consist of very small fruits.

"It does not matter whether the

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grower intends to export or dry, or sell his fruit to the jam makers, he should thin out. By doing so he will gain in every respect, for, whatever purposes the fruit is required, the largest fruits will fetch the biggest prices.

"A fair-sized export of canning Apricot should average 10 or 11 to the pound weight. A fruit of that size will, of course, have a great deal larger proportion of weight of flesh as compared with the pip or stone than an Apricot going 20 or 30 to the pound,



# Control of Orchard Pests

## The Value and Limitation of Parasites

The Spraying Programme is an Insurance Policy.

(By W. H. Murray, Vacuum Oil Co.)

THE SCIENCE OF ENTOMOLOGY is probably the most fascinating of all sciences involved in fruit culture. From time immemorial entomologists have been endeavoring to develop by culture some parasite to control the various insects which are so troublesome to the commercial fruit producer.

The difficulties confronting the entomologist are simply enormous owing to the fact that after the habits and life history of a parasite have all duly been tabulated, the factor of the effects of the varying seasons is liable to upset the data which has taken years of work to compile.

It is definitely known by all fruit producers that with such insects as woolly aphis, which is such a scourge on the Apple trees throughout the world; red spider and many bryobias which attack practically all fruit trees as well as the full range of scale infesting the Citrus as well as the deciduous, including Indian wax, the scourge of Citrus trees in New South Wales and Queensland, in some seasons all of the above pests receive a very definite check from the weather conditions, hence the hot north winds in the summer time will practically control the devastation of woolly aphis during the months of January and February; whereas if there are intermittent showers of rain and high humidity, this pest flourishes unless some specific for control be applied by the grower.

The hot wind conditions are also very helpful to the Citrus growers during the above months, whereas damp and humid conditions are favorable to the scale on the Citrus as to the aphid on the deciduous.

Aforestation students throughout the world appreciate the devastation sustained by insect pests when forest trees are taken from their natural environment and planted in foreign countries. Even more so the trees of the commercial orchard, which have taken years to bring to present perfection.

Recently I had the opportunity of discussing commercial parasitic control with scientists in America, Britain and the Continent. I find that the American people undoubtedly are leading the world in scientific fruit culture, and the information I received from the various centres of research work, including Washington, Cornell, Geneva, Boyce Thompson Institute, was to the effect that

though this work was of a very fascinating character to the entomologist, it was decidedly dangerous for the commercial fruit producer to neglect a spraying calendar. Admitting that there were quite a number of natural enemies to the various types of orchard-damaging insects, they were invariably individual workers, i.e., a wasp of the *Aphelinus mali*, given favorable weather conditions, was a decided deterrent on woolly aphis, but it never in any district eradicated this pest, and as the trees where the parasite had been liberated had been protected sufficiently to allow the full parasitising, this only being effected when the orchardists refrain from using any specific for the control of fungi, scale or insect.

Unfortunately for the fruit producers in practically all countries fungi-insects, both of the aphid and scale as well as of the codlin moth type are a continuous menace, and if allowed to go unchecked, will undoubtedly destroy the crop.

Our Australian entomologists know of many natural enemies, but to date have not suggested to the orchardist that they leave the protection of their crops to these insects. The larva of the ladybird does excellent work in many districts in destroying woolly aphis, but, unfortunately, when the larva has eaten its food, and is well distended, some bright bird will nip it up and eat it or carry it to a fledgling. The ladybird, indigenous to Australia, also does excellent work on red scale on the Citrus, but has not by any means controlled this pest in any district in Australia.

Further millions of this insect have been developed in the Citrus groves of California doing excellent work, but no citrus grower in California would refrain from using some specific for the control of the red scale.

When at Cambridge University discussing many problems with Dr. Petherbridge, Senior Entomologist, the Doctor stated that owing to the fascination of the science of entomology, there was a tendency for the research work to become academic, and it was only the truly practical which could afford the commercial fruitgrower the protection he was seeking for his crops.

The expense involved in the control of disease of the commercial orchard must be regarded as an insurance policy, that is, the practical

grower definitely knows that if he allows an infestation of fungi to develop, his spraying bill is going to be considerably increased, whereas, if he uses, under scientific suggestion, the right type of fungicidal material applied at the correct time, he is going to lessen his working costs and ensure a clean crop of fruit in the average season.

It is too late to attempt curative methods because, once the fungi is in evidence on the plant or fruit irreparable damage has been done. Equally so, with the control of scale and insect pests. Take the red scale infesting the Citrus. During a favorable season, a few scale can propagate numbers somewhere comparable with the population of China. This applies to hosts of scale, Indian wax, pink wax, black scale, as well as San-Jose mussel, which infest deciduous trees. The same may be said of Bryobias and Aphids.

It is, therefore, incumbent on the commercial fruit producer to develop a control schedule, always bearing in mind that prevention is much more economical than curative control. It is only a matter of time when all types of fruit trees will become diseased. This is not an extravagant statement. It is demonstrated in every country in the world. There were many districts where the growers considered they were immune from various types of insects, but the school of bitter experience has demonstrated the necessity for each individual fruit producer to familiarise himself with the life history of all types of fungi, eating and sucking insects that are liable to infest his plantation and become acquainted with all standard methods for the control of each type of disease.

If the growers of Australia will cooperate by arranging for a test plot in each district throughout the Commonwealth, truly reliable data can be compiled. By this simple means full use could be made of the services of all the science officers working for the various State Governments. Further, the officers of the Council for Scientific and Industrial Research could have an opportunity of studying the local conditions first hand.

The ideal is to create in each centre a desire for knowledge of all menaces, be they fungi, scale, mites, etc., and only by an assimilation of the knowledge of the practical man, under the guidance of trained scientists, can control be effected.

To all interested, details of the latest methods adopted in America and Britain are available, and the writer has obtained much valuable information through the media of test

plots in the various districts, and, at the present time, is having conducted throughout Australia tests with oil sprays for the control of insect pests infesting Citrus.

The Prime Minister (Mr. Bruce) stated, just before his departure for Britain, that all the money necessary would be forthcoming if the producers of Australia could justify the expense of the officers of the Scientific Research Council.

It is, at least, up to the fruit-producers to show their willingness by having in their particular district available trees which can be used for test purposes, so that the opportunity may be given to the scientists to collaborate with the practical men, and so develop miniature research stations conducted under the latest modern practice to determine insect pest control.

The data obtained would be available to all, and interchangeable, as most of the fruitgrowers' Associations are linked up from a State point of view. The Commonwealth scheme would be a simple issue.

The Thrip scourge throughout Victoria should be a lesson to all fruit-producers. There will be a dead loss of hundreds of thousands of pounds which could have been saved had the growers been fully aware of the menace threatening.

The spraying schedule is the growers' insurance policy. Effective disease control develops the bank balance.

#### THE NEED FOR RESEARCH.

The present disastrous invasion by thrip and other insect pests emphasises once more the urgent need for thorough research into the life-history and control of orchard pests. The Departments of Agriculture in the various States, through their Science Branches, are doing valuable work in this direction, but in most cases they are hampered by lack of funds, and lack of proper co-ordination between them.

The Commonwealth Council of Scientific and Industrial Research has been granted a considerable sum of money for just such work. It would be well if some at least of this was applied to strengthening the trained staffs already in existence under the several Departments; more entomologists as well as plant pathologists are urgently needed. The field services are well acquainted with their local conditions, and with a little more assistance, and the proper co-ordination of their researches through the Commonwealth Council, their work would be of even greater value.

## Queensland

Seasonal Notes : A Valencia "Sport" : The C.O.D.

THE PRESENT OUTLOOK for fruit crops is, with but few exceptions, not bright. Coastal Grapes and inland stone fruits are exceptions, and pomaceous fruit suggest fair returns. A fair setting of Citrus fruits is recorded, but unless relief from the continued dry spell is accorded, the trees cannot stand up to the strain. Mangoes have flowered profusely, and a fair crop may be expected. Uninviting samples from Townsville are already on the market.

Pineapples are not so adversely affected by dry conditions, and a good summer crop is expected, though the size of fruit is likely to show an appreciable reduction. Bananas continue to suffer, the unfavorable conditions being reflected in the crop, humidity is indispensable to Banana

so with but little effort as compared with the attention necessary in southern orchards. The pests, both insect and fungoid, are principally kept in check by natural enemies.

#### A Valencia Sport.

Though variations amongst seedling Citrus trees are not very exceptional, legitimate "sports" are particularly so. A development of the latter in Mr. R. Percival's orchard at Redland Bay shows exceptional features. An exceptionally strong shoot developed on one of the main branches of a late Valencia Orange fully 10 years old, and by its extreme vigor has practically absorbed that part of the tree. The foliage has continued about double the size of the parent, but the most important feature is the size and quality of the fruit—which is produced with equal freedom—also its season of ripening. Whilst that on the parent tree and other local Valencias was colored and fully mature, that on the sport showed only first indication of coloring. Provided the peculiarities are permanently fixed, of which there is little, if any doubt, the propagation of the sport will mean the extension of the Valencia season for six or eight weeks.

#### Banana Disease.

A recent pronouncement from Fiji, that the "leaf spot" of Queensland Bananas was identical with the "Sigatoka" disease of Fiji has not been regarded seriously by the growers, particularly those acquainted with the latter malady. Possibly climatic influences may modify the effect in this State, but the fact remains that in addition to the mildness of effect upon the plant the entire absence of any trace of injury to the fruit will require more than passing reference.

The sale and distribution of Banana suckers, which had been suspended by embargo pending inspection of plantations offering supplies, has been resumed, subject to official permits being issued for limited periods, and large areas are prepared, or in course of preparation for planting. The northern district is rather handicapped regarding supplies, as no plants can be sent north of the Herbert river. As it is reported that the isolated specimens of bunchy top found at Innisfail have been completely eradicated this provision is to be commended, even though it may entail a temporary disability.

Consternation has been caused amongst Stanthorpe Tomato growers

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culture, and the effect of its absence is very soon apparent.

#### Northern Districts.

From the northern district conditions are reported as being much more favorable, though the rainfall is far below the average. Exceptional returns have been realised from Citrus orchards in the Cardwell district, and numerous enquiries are received re further planting in that area, which, since the completion of the North Coast railway, is provided with efficient transport at moderate rates. Exceptionally fine Emperor Mandarins are produced on river flats, principally upon seedling trees, which very rarely show any variation, and are usually well developed and yielding heavy crops at six years of age. The trees, as in fact with practically all Citrus under the local conditions, are hardy and vigorous, and maintained





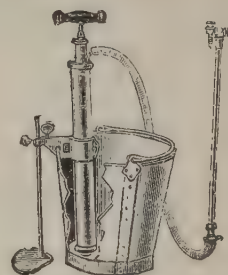
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by the reduction of duty on imported pulp, and the restriction of areas is suggested on account of local firms being unable to complete anticipated arrangements which would have admitted treating the whole of output at a reasonable rate.

### MORE CRITICISM OF THE C.O.D.

(To the Editor.)

Sir,—Your short summary of the report of the "Committee of Direction of Fruit Marketing" hardly does the Committee credit, especially as it has already been criticised both in the local press, and the various fruit journals, including your own of two months ago. A word or two, however, may not be amiss. I have already given them credit for some apparent, and we hope, real success in the Pineapple industry, but I have pointed out that Strawberries for jam had been paid a higher price before the C.O.D. came into existence than they have been paid since. I have also alluded to the great work which must have been done by their four barrows (before they were proved to be a farce), also to the wonderful impetus which they have given to the fruit industry by purchasing the goodwill of two shops and running two stalls. Such enormous efforts in the retail business must be followed with results!

On the Banana question it is necessary to discount some of their boost, because at the present time the Banana growers are sending to their

"own organisation" (the C.O.D.) as follows:—Green Bananas sent to Brisbane for sale by the C.O.D. and the selling agents—To the C.O.D., approximately 22½ per cent.; to the Selling Agents, approximately 77½ per cent.; showing how much the Banana growers think of their "own organisation."

And now we have one belonging to the innermost circles, one of the high priests of the Committee, Mr. Mehan, of Stanthorpe, who states that they are paying 50 per cent. too much for efficiency. Mr. Mehan stands out for efficiency at a reasonable cost, and declares (vide the Stanthorpe local press), "that the expenses are too high, in fact, equal efficiency could be obtained at half the cost, etc."

Well sir, your readers can imagine the squalling in the dovecote. The expenses (and this of course includes salaries, fees, expenses and other pickings), are 50 per cent. too high. Like every other Government State enterprise, it looks as though it will break down of its own weight. It has of course been stated that it is not fair to dub the Committee a Government Trading Scheme or enterprise, but considering that the Government's nominee has a personality possibly equal to the whole of the members, or at any rate, overshadowing any half dozen, it is fair to say that the Government influence is greatly in excess of any other. However, Mr. Mehan has been in the nest ever since the first egg was hatched, and he now says that the expenses are 50 per cent. too high.

What will the growers do about it is the problem to be faced in the near future, notwithstanding any communications which you may have from gentlemen who can neither stand scorn nor criticism, I take the opportunity of asking your correspondent, Mr. Will Kitchen, member of the Committee of Direction of Fruit Marketing, a correspondent in your October issue, what he thinks will be the outcome of Mr. Mehan's statement, that the Committee of Direction "are paying 50 per cent. too much for efficiency!" Your readers will no doubt be interested in Mr. Kitchen's reply, and I can assure you that all your Queensland readers will be glad to hear what Mr. Kitchen has to say.—Yours, etc.,

W. SAM JOHNSON.

Brisbane, November, 1926.

### THRIP AT BUNYIP (Vic.).

We are hard hit by the thrips, and have perhaps a 10 per cent. crop. We sprayed daily for three weeks, but saved very little. We slaughtered millions, but there were always millions more. They are on the wild flowers, in Tomato blossoms, on the Oats and the Grasses.

This is a terrible blow. A week ago I wrote to Professor Rivett, giving our own experiences, and suggesting further work for the Council of Scientific and Industrial Research. He is very keen on the work and means to urge an energetic campaign for our assistance.—F. Thomas, Bunyip.



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## Tasmania

Notes and Comments :: Advisory Board  
Operations for December

**T**HE WEATHER continues unseasonable, and frequent changes from extreme heat to cold, showery conditions, with high winds are being experienced.

Although the weather has proved adverse to normal development, the crops are generally much cleaner and more forward than would be expected. Black spot is showing up in some centres, particularly amongst areas that have existed in a semi-abandoned condition, and upon which the early spraying has been neglected. The general prospects are for about a 60 per cent. crop of Apples, but unless the weather conditions improve, this estimate will be reduced considerably.

### Assistance to Fruitgrowers.

The requests of the Tasmanian fruit industry for assistance to Apple exporters who suffered such serious losses during the 1926 export season, have at last been recognised by the Federal Government. A sum of £25,000 is to be made available as a loan, free of interest, and spread over a period of five years for repayment. A provision is also made that before such amount will be forthcoming, the State Government must supplement it with a like amount under similar terms.

In discussing the probable allocation of such loan, the State Fruit Advisory Board is unanimous that the money be only available to necessitous cases, and that a thorough investigation into each individual claim be made before any disbursement is made.

A Bill is being prepared which will be submitted to Parliament, to provide the State contribution, and will be treated as an urgent measure.

### Fruit Bill.

Although the proposed Bill has received the support of both conferences of fruitgrowers and a large number of the progressive fruitgrowers' associations, very strong opposition is being encountered from the local municipal bodies and Fruit Boards, and especially from growers who comprise such Boards.

The Bill has passed through the House of Assembly, and is now before the Legislative Council.

The need for a better organisation of the control of fruit pests is becoming more apparent to the fruit-grower, especially with the mainland

experience in regard to thrips.

Tasmania is fortunate that so far she has escaped several of the serious insect pests attacking fruit trees which are experienced upon the mainland, and every effort should now be made to preserve this immunity.

It is becoming recognised that the present system of municipal control by Boards and Councillors, is quite ineffectual, and, moreover, the methods of inspection leave the door open for the introduction, and possible establishment of many serious diseases and pests that we have hitherto been free from.

### Markets and Migration.

In accordance with the expressed policy of the Markets and Migration Commission, a commencement has

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### Correspondence Invited.

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been made to effect an economic survey of the Tasmanian fruit industry.

The area selected for the initial undertaking in this respect is a representative section of orchard country in the Huonville district, bounded by the Ranelagh and Main roads, and comprising many different types of orchards.

The duty of making this investigation has been allocated to Mr. H. Rose, who together with the Departmental officers is at present collecting and collating the required data.

### Obituary.

It is with great regret that I have to record the death of Sir Henry Jones, who was without doubt the most prominent man in the Tas-

manian fruit industry. Sir Henry, who started life in a very humble position, rose to become one of the captains of industry, and by his enterprise was largely instrumental in developing the State in many different branches of production and manufacture.

Throughout his successes he still retained his unassuming personality, and could always be reckoned upon as one who would readily advise on or fight for Tasmanian interests.

All sections of the community recognise that the State has lost one of its foremost citizens, and one who could ill be spared under present-day conditions.

### State Fruit Advisory Board.

A meeting of the State Fruit Advisory Board was held on November 3. There were present, Messrs. N. Campbell, M.H.A. (Chairman), J. H. Astell, W. H. Calvert, M.L.C., A. Davies, T. J. Eddington, F. Beauchamp (Port Huon Co-op.), F. Cole, B. J. Pearsall, E. Ross (H. Jones and Co. Ltd.), and P. H. Thomas (Secretary).

Late Sir Henry Jones.—A motion of sincere regret at the untimely death of Sir Henry Jones, and of sympathy with Lady Jones and family was carried by members standing in silence.

Assistance to Growers.—The Federal Government having offered £25,000 for five years without interest, provided similar provisions were made by the State Government, it was decided to thoroughly scrutinise every claim for assistance.

Export Control.—The Chairman said at the recent Interstate Conference, complete agreement had been reached regarding the provisions of the proposed Bill, but Tasmania would not concede having less than three representatives on the Board.

On the motion of Messrs. Astell and Cole, it was unanimously decided to support the Bill as decided by the recent Conference (having two Tasmanian delegates) and to recommend its adoption by growers; meetings of growers to be called to have the proposals explained.

Sydney Agents' Committee.—The appointment of Messrs. F. G. Stevens and Son to the Associated selected Agents' Committee, was approved. Mr. W. H. Calvert, M.L.C., was appointed to attend the annual reunion of the Associated Agents in Sydney. It was decided to obtain advice regarding the inauguration of auction sales for Tasmanian fruit in Sydney.

Selected Brisbane Agents.—It was resolved to request the Brisbane Associated Agents to re-organise on a

better footing to enable growers and agents to secure the full benefits of co-operation in marketing.

**1927 Export.**—The proposed programme of the Commonwealth line of steamers was approved.

#### ORCHARD NOTES: DECEMBER.

(By P. H. Thomas, State Fruit Expert.)

**O**RCHARDISTS are now in a position to estimate the approximate production from their different fruit areas and make their plans accordingly.

#### Marketing Preparations.

Case material should be on hand as soon as possible and carefully stacked to allow for drying. One of the best methods to ensure this being carried out satisfactorily is the square system. The ends and sides are stacked in pairs at right angles in the form of a column and weighted at the top to prevent buckling or warping. This allows for adequate ventilation and the production of seasoned cases, which are preferable for the export trade.

It is desirable also to obtain the other materials necessary for packing and marketing well in advance of the period of operation. The essentials for giving facility in handling a large quantity of fruit are convenience and systematic working. Most fruit-packing sheds could do with a good overhaul and a re-arrangement to effect these improvements. The ideal method is to carry out the grading and packing of the fruit in the centre of the shed; overhead light in the form of skylights being available for this purpose. Fruit received from the orchard can then be stacked in the most convenient position without interfering with the light; similarly that which is branded and ready for export may be assembled at the main outlet.

#### Spraying.

**Codlin Moth.**—During the first week of the month, the second arsenate of lead spray should be applied to control the codlin moth. In several districts it is noticeable that certain of the leaf and fruit-eating insects are on the increase, particularly the "looper" caterpillar. The first arsenate spray (calyx stage) will control such insects, and it is noticeable that where this has been applied, practically no injury is visible on the young fruits.

**Red Spider** (*Bryobia pratensis*), is giving a lot of trouble in some districts, especially upon areas which have not received the strong "dor-

mant" oil sprays. At the present time the best means of checking infestation is by the application of the atomic sulphur sprays. These can be combined with arsenate of lead and applied together. The difficulty in effectually controlling red spider at the present period is in applying a contact spray sufficiently strong to kill the spiders without injury to the fruit or foliage. Another disadvantage is the habit of the spiders in sheltering under the leaves, which gives them protection against most sprays except those of a volatile nature.

**Powdery Mildew.**—The majority of orchardists have reduced the powdery mildew amongst their susceptible varieties to a minimum by the use of the iron sulphide and atomic sulphur sprays. In cases where the disease is still experienced, it is advisable to continue with atomic sulphur at a strength of 1 lb. to 12 gallons of water.

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**Black Spot.**—Very few fruitgrowers took risks of black spot infection in their Apple and Pear orchards this season, and the crops are generally showing the benefit of the recommended treatment. This season the weather conditions have been conducive to the development of the disease, and it is easy to pick up a fair percentage of infected fruits on unsprayed areas. Growers are advised to keep a close supervision of susceptible varieties, such as Cleo., Sturmer, etc., and if further signs of infection appear, to treat with weak Bordeaux (1-1-40), or lime sulphur (1-60) 32 degrees Beaume test.

#### Thinning Crops.

An inspection of the crops in the different districts reveals that a few varieties are likely to carry far greater crops than their capabilities will permit them to satisfactorily develop. At about the middle of the month the true prospects may be

more correctly gauged, as the majority of smaller sized fruits, which are showing, will fall. Growers are advised to thin out crops that remain too crowded after this period. This will be necessary for their satisfactory development, especially those which are classed amongst the "small varieties."

#### Re-Working Fruit Trees.

At this period it will be necessary to go over trees that have been re-worked by grafting earlier in the season and trim back all shoots other than those springing from the scion. In cases where the graft has "missed" it is advisable to maintain either one or two shoots in an advantageous position at the head of the limb for budding during February and March.

#### TASMANIAN FRUIT PROSPECTS.

##### Medium Crop Expected.

In a review of the position in regard to the fruit crops and the prospects for next season's markets, the State Fruit Expert, Mr. P. H. Thomas, reports as follows:—

The general indications for the State are for a good medium crop of Apples. Most districts report a good setting of Alfriston, Scarlet, Adams Pearmain, Stone Pippin, Duke of Clarence, and Tasman's Pride. Varieties such as Sturmer, C.O.P., Ribston, and Delicious are irregular; in some districts medium to good settings are recorded, whilst others report the prospects of only light crops. Jonathan, French Crab, and Cleo., are generally much under last season's, and in very few instances in which inquiry has been made, more than a "light crop" is indicated.

The Pear crop promises to be heavy. This fruit escaped the very wet weather, and conditions were generally favorable at the blossoming period.

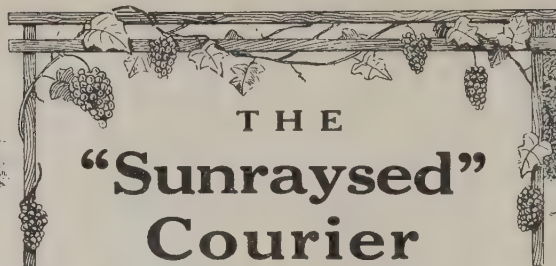
The stone fruits, particularly Apricots, were much affected by the heavy frosts experienced in September. This practically made a clean sweep in many districts, and only medium to light settings are reported upon isolated sheltered areas.

With favorable weather from now onward the prospects for the berry fruits should be excellent. The plantations are showing a healthy growth, the young canes being in a good condition to yield satisfactory crops.

#### Inquiries From Buyers.

Owing to the shortage that will be experienced upon the mainland, buyers are already making inquiries for Tasmanian fruit to fulfil their requirements at increased figures,





## THE "Sunrased" Courier

### THE WORLD'S DRIED FRUITS PRODUCTION.

#### Ahead of Consumption.

**I**NTERESTING figures relating to the production and consumption of dried fruits throughout the world, were given by Mr. Peter Malloch, at the recent annual meeting of the Red Cliffs branch of the A.D.F.A. Mr. Malloch explained that the figures were to be taken as approximately accurate, as allowance had been made for the fact that Sultanas and Lexias were classed in America as "Raisins." The figures relating to production took into account the planted areas in California and Australia that would be in bearing in the next two seasons, and these areas had been included in order to show the growers and the Government the position that had to be faced. Following are the figures given by Mr. Malloch:—

#### Sultana Production.

**California** (200,000 acres):—Average, 160,000 tons; minimum, 140,000 tons; maximum, 200,000 tons.

**Smyrna** (exclusive of war years):—Average, 37,000 tons; minimum, 28,000 tons; maximum, 46,000 tons.

**Australia:**—Average, 24,000 tons; minimum, 20,000 tons; maximum, 28,000 tons.

**Greece:**—Average, 12,000 tons; minimum, 9,000 tons; maximum, 15,000 tons.

**Crete:**—Average, 2,000 tons; minimum, 2,000 tons; maximum, 2,000 tons.

**Afghanistan and other:**—Average, 2,000 tons; minimum, 2,000 tons; maximum, 2,000 tons.

**Totals:**—Average, 217,000 tons; minimum, 201,000 tons; maximum, 293,000 tons.

**The consumption of Sultanas** was as follows:—United Kingdom, 36,000 tons; U.S.A., 120,000; Canada, 7,000; Australia, 6,000; New Zealand, 2,000; Continent of Europe, 18,000; the East, 1,000; others, 2,000 tons—a total of 192,000 tons. The average production of Sultanas was greater than the consumption by 25,000 tons, and the present plantings were more

than sufficient to meet the world's requirements.

The above figures take into account the planted areas in California and Australia coming into bearing within the next two years. The Californian estimate of 140,000 tons minimum and average is based on the 1925 production, when considerable quantities were sent to the fresh-fruit market.

#### Raisin Production.

**California** (156,000 acres):—Average, 100,000 tons; minimum, 60,000 tons; maximum, 156,000 tons.

**Spain:**—Average, 11,000 tons; minimum, 900 tons; maximum, 14,000 tons.

**Australia:**—Average, 5,000 tons; minimum, 3,000 tons; maximum, 7,000 tons.

**South Africa:**—Average, 4,000 tons; minimum, 3,000 tons; maximum, 5,000 tons.

**Totals:**—Average, 120,000 tons; minimum, 75,000 tons; maximum, 182,000 tons.

**The consumption** was as follows:—United Kingdom,

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18,000 tons; U.S.A., 60,000 tons; Canada, 3,500; Australia, 2,000; New Zealand, 500; Continent, 2,000; the East, 1,000, and other, 1,000—a total of 88,000 tons.

The average production is greater than the consumption by 32,000 tons, and the glut in the world's markets

was averted only by the marketing of a large tonnage of Raisin Grapes on the fresh-fruit market in the U.S.A., and by the distillation of a large proportion of the crop into spirit in Australia. In California there was one plant alone erected at a cost of 200,000 dols. for the conversion of the fruit into syrup. The surplus dried fruit had at one time been sold as stock feed, but dealers had bought it up in this form and had placed it on the market again as ordinary dried fruits. The equivalent of 50,000 tons of dried Raisins had been marketed in the U.S.A. as fresh Grapes.

#### Currant Production.

**Greece:**—Average, 114,000 tons, actual; minimum, 90,000 tons; maximum, 160,000 tons.

**Australia:**—Average, 12,000 tons, possible; minimum, 9,000 tons; maximum, 16,000 tons.

**Totals:**—Average, 126,000 tons; minimum, 99,000 tons; maximum, 176,000 tons.

#### The Currant consumption

was as follows:—United Kingdom, 60,000 tons; Holland, 10,000 tons; Germany, 6,000 tons; Canada and U.S.A., 5,000; Australia, 4,000 tons; France and Belgium, 1,000 tons; New Zealand, 500 tons; and other, 500 tons—a total of 87,000 tons.

The production was 37,000 tons greater than the consumption, and the balance was maintained only by the Greek retention for other purposes, including conversion into spirit, the average being 35 per cent., or 40,000 tons. A comparative failure of the Currant crop still leaves more than enough to meet the world's requirement, and a maximum crop is double the world's requirements. Thompson's seedless were replacing Currants in the United States and Canada and in the United Kingdom, and the Greek export to these countries dropped from 23,000 tons in 1911-12 to 5,113 tons in 1925-6.

The only hope for an improvement in Currant values is in the development of trade between Greece, Russia, Germany and Austria, but there is no sign of developments in that direction yet.

## SULPHUR IN DRIED FRUITS.

### Export Regulations.

The Comptroller-General of Customs recently advised that several cases had come under notice in which Sultanas shipped to Great Britain from one of the States contained excessive quantities of sulphur dioxide, ranging from 14.6 grains to 17.8 grains per pound.

In view of the fact that the public health (preservatives in food) regulations prohibit, after January 1, 1927, the importation or sale within the United Kingdom of dried fruits which contain sulphur dioxide in excess of the following quantities:—

Raisins and Sultanas—5.25 grains per lb.

Apricots, Peaches, Nectarines, Apples, and Pears—14 grains per lb.

The question of the export of dried fruits containing sulphur dioxide has been reviewed, and it has been decided not to permit, after October 1, 1926, the exportation of dried fruits in which the sulphur dioxide contents exceed those allowed by the English regulations, for the reason that dried fruits shipped from Australia after that date will in all probability be placed on the London market early in the new year, when the British regulations will be in operation.

### GREEK CROP OF RAISINS.

The American Trade Commissioner at Rome, Italy, on September 11, 1926, reports that while the leading agricultural crop of Greece is Currants, the production of Raisins is of considerable importance. Sultanas are the only Raisins grown in the Corinth district, but Crete produces both Sultanas and Rosakis (states the Department of Markets and Migration).

Estimates just gathered of the 1926-27 Greek Raisin crop show rather wide variations. According to the best opinions available, the prospective yield of Sultanas for all of Greece will be between 9,000 and 10,000 tons. It is estimated that the yield in Crete of Rosakis will be around 5,000 long tons.

According to the Commissioner, it is quite generally held, that the Cretan growers are curtailing their plantings of Rosakis and increasing those of Sultanas, owing to the fact that the latter are more profitable. The influence of refugees from Turkey has been felt in the adoption of more skilful methods of caring for these, and in manipulating the product. Dealers state that the Cretan Sultanas are now comparable with

the best Smyrna Sultanas and that they have received increasingly favorable quotations in the London markets in the past year. In the Corinth District also, Sultana plantations are being extended yearly.

August estimates placed the Grecian Currant crop at 147,000 short tons, and according to the Central Currants Office, there will be no carryover from the present crop.

### "SOME" PIE!

An immense Cherry pie, measuring 30 inches in diameter and 4 inches in depth, weighing 46 lbs., and containing 5,000 Cherries, was presented to the President and Mrs. Coolidge from the Cherry-growers of the Grand Traverse region of Michigan. The pie was baked in Traverse City (Mich.).—"California Cultivator."

## OBITUARY.

Mr. J. Darwent, of Coonawarra, S.A.

We regret having to report the death of Mr. J. Darwent, of Coonawarra, South Australia, which took place on August 10 last, at the age of 79 years. His death was to a certain extent unexpected, although he had a severe heart attack about a fortnight earlier.

Mr. Darwent was the oldest grower in Coonawarra, having selected his property some 34 years ago. He was a member of the Phylloxera Board for Division No. 7, and took a keen interest in every connection with the advancement of the district. He was a member of the Penola District Council for 42 years, during 30 years of which he was chairman. He leaves a widow, two sons, and two daughters to whom sincere sympathy is extended.



### This Booklet

which was compiled primarily to advertise

## SULPHATE OF AMMONIA

gives a wealth of information concerning fertilisers generally, and its circulation has helped considerably in the education of the orchardist to a better-paying fertiliser practice. Many copies have been circulated to students of agriculture and horticulture throughout the Commonwealth and New Zealand, and some significance must be attached to the greatly increased sales of Sulphate of Ammonia since its publication

"Productive Fertilisers" is yours for the asking

The Australian Sulphate of Ammonia Propaganda Committee  
360 Collins Street, Melbourne



## Victoria

Fruitgrowers' Meeting :: Export Control :: Interstate Trade

### APPLE AND PEAR GROWERS' ASSOCIATION OF VICTORIA.

#### November Meeting.

A MEETING of the Executive of the Apple and Pear Growers' Association of Victoria was held in Melbourne on November 17, there being present:—Messrs. J. H. Lang (Chairman), Murray Jones, H. J. Willoughby, H. W. Carne, J. W. Bailey, F. Thomas, and the Secretary (R. E. Boardman). An apology was received from Mr. W. J. Williamson.

**Press Reports.**—It was decided to invite the press to attend all meetings of the Executive.

**Fruit for China.**—The President reported that the experimental shipment of 250 cases of Apples to Hong Kong, arrived safely.

With the rebate of 3/- per case from the Government for freight on shipment, the grower received 8/- per case at Harcourt railway station. It was decided to keep in touch with possible developments in order to secure any trade possible.

**Affiliations.**—The Secretary reported that the following Associations had affiliated:—Harcourt Fruit Supply Co., Tyabb Cool Stores, Beaconsfield Upper, Pakenham, Strathfieldsaye, Fruitgrowers' Cool Stores Association; Bunyip, Garfield and Tynong; Drouin and Warragul.

The representatives of Narre Warren and Red Hill stated that those Associations would also affiliate.

On the motion of Messrs. Willoughby and Jones, it was decided that in the case of cool stores or associations with mixed membership, only those shareholders or members who are actually fruitgrowers should be expected to pay the affiliation fee.

**Fruit Export Trade.**—The Secretary read a letter sent at the instance of the President to Mr. H. H. Smith, M.L.C., noting his press comments re quality of fruit exports, and requesting his attendance; also a letter from Mr. Smith, agreeing to attend at an early date. It was decided to invite Mr. Smith to attend the next meeting, and to give details of his experiences.

**Trade with Brisbane.**—The President read a letter from Mr. D. G. Wills, stating that the railway concessions previously outlined were not fully available. However, the benefits of consigning in bulk were considerable, and the Chairman stated

he had replied agreeing to continue consigning to Mr. Wills for the present.

**Export Control Board.**—Mr. Lang reported having attended the recent Interstate Conference called by the Minister for Markets, Dr. Soilleux, and subsequently his proxy (Mr. Jost) opposed the Bill, but the conference was in favor, reducing Tasmania's representation from three to two, limiting the period to three years, and inserting a clause safeguarding the f.o.b. trade. A debatable point had arisen regarding the voting powers of owner or occupier, and he suggested that both be given

## J. G. MUMFORD

(Established 1906)

### Fruit & Vegetable Salesman

Account Sales Posted Daily

### APPLE EXPORTER

"Fruit Exchange,"

449-451 FLINDERS LANE

Branches { Western Market  
Victoria Markets

MELBOURNE

Reference—Satisfied Growers in all States

a vote, where an orchard was leased, the lessee to vote.

Mr. Murray Jones: "What is the next move?"

The Chairman: "We must educate the growers as far as possible."

The Minister had stated there would probably be a further meeting of the conference shortly. Tasmania had voted against the amended Bill, but he understood their State Fruit Advisory Board had since approved of it.

Mr. Bailey stated that the report had been circulated that he was seeking a position on the Board. This was nonsense. He was not going to England at the expense of the growers.

The report was received, on the motion of Messrs. Carne and Jones.

The Chairman read a letter from the Department of Markets, giving the dates of sailing of Bay Steamers for the coming season, and providing separate chambers for fruit from each port of despatch.

**Association's Policy.**—Mr. Lang directed attention to the previous resolution, by which the Executive supported control. As this was keeping some Associations from affiliating, it was decided that the matter of support or opposition to the proposed Control Bill be left to the discretion of the Associations and individual members.

**Crop Prospects.**—Crop prospects were reported as follows:—Harcourt, most disastrous year known, Apples, 10 to 15 per cent. crop; Pakenham, 10 to 15 per cent. crop; Red Hill, patchy, probably 25 per cent. crop; Tyabb, lowest on record; Narre Warren, 10 to 15 per cent. crop.

**Resignation of Mr. W. E. James.**—It was decided to accept with regret the resignation of Col. W. E. James, of Harcourt, and to write, expressing appreciation of his services.

**Victorian Fruit Council.**—It was decided to pay half the affiliation fee, viz., £12/10/-, as soon as funds were available.

**Removal of the Western Market.**—On the suggestion of Mr. Willoughby, it was decided to keep in touch with developments in connection with the removal of the Western Market.

**Pest Control.**—It was decided to write to the Council for Scientific and Industrial Research, and to the State Agricultural Department, urgently requesting a thorough investigation into the life history of the thrip pest, and methods for its control, and for similar research work regarding other orchard pests.

### LANCASTER FRUITGROWERS.

The balance sheet of the Lancaster Fruitgrowers' Association, presented at the annual meeting in October, showed the receipts to be £603, leaving a credit of £5/12/8. From the sale of fruit in trucks £278/7/10 was netted. Mr. Cooper, who was in charge, was complimented on the splendid result.

Mr. W. F. Cooper was re-elected President, Messrs. W. Higgs and Jefferson Vice-Presidents, and Mr. T. Hughes Secretary and Treasurer.

It was decided to affiliate with the northern district association, and agree to a levy of 6d. on all fruit delivered to the canning factory.

### VICTORIA MARKET HOURS.

A circular has been issued by the Melbourne Retail Fruiters' Association, stating that at a general meeting held recently, a resolution was carried almost unanimously protesting against any change in the hour of

starting business (viz., 4 a.m.), at the Victoria Market.

### EXPORT FRUIT CONTROL.

#### Strong Opposition in Victoria.

THERE was a large attendance of fruitgrowers from all parts of Victoria at the meeting called by Dr. G. Soilleux to hear the report of the recent Inter-State Conference, and to deal with the matter of the proposed Fresh Fruit Export Control Bill.

Mr. J. Tully was elected chairman. Dr. Soilleux read the notice and the advertisements calling the public meeting of Apple and Pear growers, and said the attitude of the Victorian industry should be defined. He moved:

That this duly convened and representative meeting of Victorian

## H. M. WADE & CO.

### Fruit Merchants

Prompt Advices of Sales  
— CHEQUES WEEKLY —

**471 FLINDERS LANE  
MELBOURNE**  
And WESTERN MARKET.

Apple and Pear Growers hereby expresses disapproval of the proposed Fresh Fruit Export Control Bill, and requests the Government not to introduce the measure.

Mr. L. J. Lipscombe (Croydon) seconded.

Mr. J. H. Lang (Harcourt) spoke in favor of the proposed Bill. So also did Messrs. C. P. Nobelius (Warragul), J. W. Bailey (Narre Warren), and F. Thomas (Bunyip).

Opposition was expressed by Messrs. E. Pritchard (Harcourt), S. Brown (Pakenham), A. F. Thiele (Doncaster), C. H. Jost (Quantong), Kennedy (Pakenham), J. H. Ely (Harcourt).

A large parcel of letters was handed to the Chairman by Dr. Soilleux from growers and associations all over Victoria, supporting his opposition to the proposed Bill.

The subject was keenly debated, and on being put to the meeting was carried by 26 votes to 7.

[Report, much reduced, full details next issue.]



Senator Apple Tree, 7 years old, in Mr. J. Lumb's orchard, Thulimbah, Q.

### QUEENSLAND AND VICTORIAN FRUIT TREES.

Mr. G. W. Peart, Bairnsdale, Victoria, writes:—I enclose two snaps sent to me by Mr. Jas. Lumb, of Thulimbah, Queensland. The trees in each photo. speak for themselves, and Mr. Lumb would like them used in the "Fruit World" if possible. The trees could not have been affected by crown gall, root-knot or anything else, judging by the way they have grown. The trees in the 28-acre orchard were sent from here, but nowadays we Victorian nurserymen are barred, so to speak.

### VICTORIAN BERRY CROPS.

Many of the berry crops in the Mt. Dandenong district have suffered severely from thrips. The officers of the Department of Agriculture are conducting numerous experiments in the hope of saving the later crops, but so far apparently without much success.

Tomato growers have also suffered heavy losses, and the only fruit that does not seem to be seriously affected is the Apricot. Suggestions have been made in Parliament for the relief of the sufferers.

### INTERSTATE FRUIT TRADE.

A meeting of the Shepparton Irrigators' Association held on November 22, was attended by a number of Sydney selling agents, among whom was the Sydney Market Representative (Mr. D. G. Wills), who said there would be a good market for Goulburn Valley fruit in Sydney this season

owing to the short crop in New South Wales. The plan adopted by Shepparton growers last year of collecting fruit and despatching it to Sydney in refrigerated trucks had worked admirably, the fruit arriving in splendid condition. Mr. Wills urged the wider adoption of the practice in other centres.

It was learned that the State Electricity Commission was preparing plans to extend its services to the orchard district around Shepparton.

### SHEPPARTON CANNERY.

#### Effect of the Light Crop.

At a special meeting of the Shepparton Irrigators' Association on November 10, the Managing-Director of the Cannery (Mr. A. W. Fairley) expressed anxiety regarding the position of the cannery owing to the light crops of canning fruits. There

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Collins Street, Melbourne.  
Remittances with Account Sales rendered promptly.

**FOR A SQUARE DEAL**  
Consign your Fruit to  
**FRUITGROWERS DEPOT**  
(Licensed and Registered by the Government of Victoria).  
Managing Director—M. J. FOY.

Wholesale Fruit and  
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Importers and Exporters of Interstate Fruit  
**471 Flinders Lane, Melbourne**  
**TELEPHONE F 1392.**  
Telegrams: **FRUITGROWERS,**  
471 Flinders Lane, Melbourne.

would be a heavy crop of Apricots, Pears, medium; and Peaches, light. The cannery had entered into commitments for new buildings and machinery to cost £40,000; the total cost of buildings and machinery, less depreciation, was now shown at £150,000. Last season the cannery had processed 6,673,968 2 lb. tins. Running costs had to be met, and it was necessary to receive a full crop of canning fruit.

Mr. Fairley said that the cannery would accept fruit in the 1927-28 season from all growers who signed and carried out the contract in 1926-27. The price was £12 a ton, and the management believed that a final further payment could be made, as in the last two years, if the whole crop was sent to the cannery.

After discussion, it was agreed to support the cannery, and recommend all growers to sign the contracts forthwith.





## “--Have Not Many Hens Yet Never a Day Without Eggs”

IT IS disappointing to keep on buying food and feeding fowls, to have the worry of looking after them, and yet not get a regular supply of eggs. In these circumstances, it is only a natural question—“Why keep fowls when one has to buy eggs, and at the present high prices?”—that many “backyarders” are now asking themselves. Honestly, if your fowls are not old, three years and over, there should be no need to buy eggs.

Your fowls have quite a number of egg-seeds within them, which only need stimulating into growth. In other words, give your fowls a natural food-tonic—Karswood Poultry Spice—and you won't have cause to feel disappointed in them. The truth and wisdom of this you can definitely prove for yourself by the expenditure of one solitary shilling, enough to purchase one half-pound packet of Karswood, which is sufficient for 20 hens for 16 days. The results from this very modest outlay will soon convince you of the merits of Karswood. Thousands of poultry owners are now getting plenty of eggs through using Karswood. Why not you? Read what Mr. Henry Thorpe says:—

“Find It Excellent.”

Gentlemen,

Kindly forward as soon as possible 2 lbs. of Karswood Poultry Spice, for which I enclose Postal Note for 5/6 as payment, including postage. Although I have not many

full-grown hens, ever since June 20, 1925, I have never been one day without eggs, which fact I attribute to the constant use of “Karswood” Poultry Spice since that date.

I also find it excellent in promoting the growth of young chickens.

Wishing you every success, I am,  
Yours respectfully,

(Sgd.) HENRY THORPE.

Eauabalong, N.S.W.

April 21st, 1926.

### A Constant User of Karswood.

Dear Sir,

I have been a constant user of “Karswood” Spice for some months, and have had first class results. I have told many of my friends about the Spice, and they are using it also, and having good results.

(Sgd.) J. FINLAYSON.

Foy St., off Alma St., Paddington, Brisbane.

### SUPPLIES.

Karswood Poultry Spice is obtainable from all stores and poultry food suppliers at the following standard prices:— $\frac{1}{2}$ lb. packets, 1/-; 1lb. packets, 2/-; 7lb. tin, 13/-; 14lb. tin, 25/-; 28lb. tin, 48/-.

If your local dealer cannot supply you, write direct to Messrs Henry Berry & Coy. Pty. Ltd., 568-80 Collins Street, Melbourne, adding postage (6d. on  $\frac{1}{2}$ lb. packets and 9d. on 1lb. packets) to the above prices.



KEEP BETTER POULTRY.

#### Star Boarders.

It is now an acknowledged fact that the hen that lays is the hen that pays. Do not keep "star boarders" which never repay you for their food and management. Too many hens are carried on our farms to-day at an absolute loss, and these hens should be parted with to make room for others that lay.

#### Egg Production Groups.

There are three groups of hens. One group comprises hens laying a high yearly total—from 200 to 300 eggs. A second group which lays from 100 to 200 eggs, and a third which lays from 0 to 100 eggs. Yes, there are many hens that never lay a single egg, just as there are fruit trees that never bear fruit, and one can pick out these hens.

#### Profit or Loss.

There are on record two sisters; one hen laid 203 eggs during her first year of production, and the other only 36 eggs during the same period! The good layer does not necessarily eat more than the poor layer. To feed these two hens for a year cost about 7/6 per hen, and the value of their eggs taken at an average price of 1/6 per dozen, was 25/6 and 4/6 respectively. Thus, the high-record hen showed a profit above her feeding-cost of 18/- for the year, while her low-producing sister gave a dead loss of 3/-. And there are flocks that are made up of birds of which these two are examples. Which is your flock?

#### Good Management.

A hen giving a yearly average of 150 eggs pays handsomely for her keep; thus, it can readily be seen that there is a big margin of profit on a flock giving a high yearly average. Good food will not make a bad hen good, but bad food will make a good hen bad. Good birds, good feed, good care, and common sense are required. They guarantee success.

#### Cull Your Flock.

If poultry farming is your business, study your individual fowls. Help them over their moulting period. Feed them on the most economical

and profitable ration. Cull out the unprofitable ones. Do not keep good hens too long, as their egg-producing capabilities decrease after the second year of production. Either set them aside for breeding purposes, or replace them by young hens.—"Farming in South Africa."

#### "APTO" TABLE POULTRY TALKS.

The month's sales have been pleasing alike to consignor and salesmen, but the distributor has had a rough time of it. At the latest sale light hens considerably eased, but the fall mentioned carries no benefit to poulterers just because weight and more weight constitutes the demand. To those carrying a stock of green food or any food at all cheap, the obvious thing to do under the circumstances would be to hold light birds till close to Christmas, by which time the necessary weight might reasonably be looked for.

Big Cockerels, 16 to 20 weeks old, have been, and should continue to be,

dear, say at rates from 11/- to 16/- or 18/- per pair, provided always the birds carry condition. Staggy Cockerels, realising from 11/- to 13/-, should be cleared at once, because any added week lengthens and hardens spurs, to the hurt of values.

Hens, especially colored sorts, should be treated the same as cockerels, heavy lots being cleared, light sorts held until weights improve. At the moment, 10/- is not hard to get for really good hens. White Leghorn hens of all grades fell this week, and we are not hopeful of early improvement.

Muscovies—ducks and drakes—are scarce and dear, fairly good ducks clearing 10/-, with drakes at from 14/6 to 17/- pair—good prices for rushed birds, say 13 weeks old. Old Muscovies, especially ducks, are selling well and should continue to do so right up to Christmas. Thursday's sale is generally the better for ducks, as also for turkeys.

#### Sale Prices.

Poussins, 1/- to 2/-; grillers, 2/6 to 5/6; W.L. cockerels, 5/9 to 11/-; colored cockerels, small 6/- to 7/-; medium, 7/6 to 10/6; heavy, 11/- to 16/-; stags, 11/- to 12/10; W.L. hens, light, 4/6; medium to good, 4/9 to 6/7; colored hens, light, 5/- to 6/-; medium, 6/6 to 7/6; heavy, 8/- to 11/1; Muscovy ducks, 9/9 to 10/2; old Muscovy ducks, 7/- to 7/9; Muscovy drakes, S.W., 12/-; better to good, 14/- to 17/-; English, 9/- to 10/9; Indian Runners, 7/- to 8/1; turkey gobblers, 30/6 to 53/6; turkey

## A REMARKABLE FACT!



IS THE ONLY SELLING FLOOR IN THE  
— STATE OF NEW SOUTH WALES —

entirely engaged in the disposal of

POULTRY KEEPER'S PRODUCE ONLY

We fight to maintain the price of the product we handle, and being disinterested in any other farm product, have no need to encourage price cutting to sell other lines. We sell on a commission basis only, and the greater the price realised the more it is to our advantage

Essentially a Poultry Farmer's Selling Floor

## The Australian Poultrymen's Trading Organisation

TURKEY, EGG AND POULTRY SALESMAN

7, 8 and 9 MUNICIPAL POULTRY MARKETS, ULTIMO  
ROAD, HAYMARKET. Phone: City 1154.

Crate and Egg Case Labels Posted on Application.



hens, 20/-, 20/6; squabs, 3/4 to 4/2. (All prices at per. pair.)—"Apto" Report, 12/11/26.

### DO BEES INJURE FRUIT.

A British Court of Justice seldom displays its ignorance of natural history, for, like all other wise people, when it is unacquainted, it as once takes steps to command the services of specialists to enlighten the court. Moreover, the judges are men of wide education. During his passage through the courts, the litigant is almost certain to discover a judge who has some knowledge of the subject. But a decision of the full court, given recently, says Mr. Tarlton-Rayment, the well-known authority on bees, illustrates one of the very rare instances when the judges are all at sea. The facts are few and encumbered with confusing detail, so that the verdict of the court is all the more extraordinary. Mildura, a fruit growing centre, has ordered all bees to be confined to their hives during the months of February, March, and April, in an attempt to abate "the nuisance" caused by the insects visiting the fruit, while exposed for drying. The bee keeper, well aware of the fact that he cannot confine his bees for one week without causing all to die, and knowing that in no other country has a court ordered the death of millions of industrious insects, promptly appealed to another court, which, after evidence had been taken, gave a verdict in his favor, and one which was in uniformity with that of world's court. However, the Full Court has quashed what dozens of others courts have supported. The world is right, and the Full Court is wrong, but I do not wish it to remain in error, and I propose to place before it some facts that might alter its views.

For 30 years, I have been amongst bees, and your readers will be surprised to learn that I have compiled a census of over 2,400 distinct species for the world, 900 for Australia, and to get closer home I have found over 80 distinct species in the little bay promontory known as Sandringham. For 20 odd years I actually handled

many millions of honey bees every week. In all that time and amongst all that number, I have never known of one honey bee to bite a sound fruit of any kind.

The mandibula, or jaws of the "worker" honey bee are spoon shaped, and they cannot puncture the skin of a Grape or any other fruit, and when ever bees are seen on the fruit one can feel very certain that they are sucking the juice from holes that have been made by (1) birds, larvae of insect pests, and wasps; or (2) splits in the fruit skin caused by wind, rain, or sun. I am almost ashamed of the antiquity of the following test, but I cite it because, in spite of its hoary age, it is not well known, as the court's decision shows. A fine bunch of sound Grapes may be hung inside the hive of starving bees, and not a berry will be damaged. American bee keepers have long ago fought such cases, and the U.S.A. courts now know too much of the biology of the honey bee to be misled by councils, who are laboring under false impressions, but who are also in a position to do a grave injustice to the apiarist. The law cannot order the bee keeper to remove his apiary, but it does command him to confine them for three months, well knowing that such imprisonment will inevitably destroy every bee.

### BEES REQUIRE WATER.

Bees require water in the dry months, and supplies should be provided in all ranges where water is not permanently available within a quarter of a mile of the hives.

### APPLES FOR CHINA.

#### Results of Trial Shipment.

The account sales have now come to hand in connection with the recent experimental shipment of 250 cases of Apples to Hong Kong, despatched by Harcourt growers in July. These show that Munroes realised 12/6 to 13/- a case; Stone Pippins, 12/- to 13/-; Sturmers, 12/-; Schroeders, 11/-; and Donaldson, 9/-. The charges at Hong Kong, including landing cost of cablegrams and commission, was 11½d. a case, but this being an experimental shipment, the Victorian Government agreed to subsidise growers to the extent of one-half of the freight, such subsidy to be refunded in proportion as the fruit realised more than the Melbourne parity. The agents who sold the fruit state that the market was dull for Apples on account of the many ship-

ments arriving during ten days from America, Chefoo, and Tien Tsin, which caused prices to drop considerably. Before the arrival of the Harcourt Apples on the market, the price had been up to 18/6 a case. The boat freight on American Apples to Hong Kong, not stored in refrigerator, is about 1/9 a case. Fresh fruit from Australia cannot be shipped as ordinary cargo, on account of the hot climate from Thursday Island onward. The prices, which averaged 8/- per case, f.o.r. Harcourt, were not up to expectations, but it is hoped to further experiment to develop the trade.

### WIRE STRAPPING FRUIT CASES.

The advantages to be gained strapping cases with wire is being increasingly recognised in all branches of the fruit industry, canned, dried and fresh. Because of the ease with which wire can be affixed, and the efficiency and economy of the operation, wire strapping is almost universally adopted in the despatch of merchandise generally.

In the canned and dried fruits trade the necessity for wire strapping has been completely recognised, whilst in regard to the fresh fruit trade, wire strapping is becoming increasingly popular.

The Grip-lock wire strapping system, which is controlled by Jas. Henty and Co., is effective. This strapping is a high tensile 14-gauge wire, which is tested to breaking strength of between 400 and 450 lbs. The tie made with this machine lies flat on the case, making it easy for stacking. The wire supplied with the Grip-lock machine is hard, the twist being put in the wire before it is supplied to the operator. In practice it is proved impossible to undo this tie, and should the wire be cut it cannot be rejoined. The wire is passed round the case, the straight end being passed through the loop; the machine making the flat tie in a surprisingly short space of time.

The Grip-lock tool weighs about 10 lbs., and is a product of the Birmingham Small Arms Co., England. It is a workmanlike job, and by using a hard wire there is a high breaking strain. The wire that is supplied in bundles containing 250 pieces, is cut according to the length desired. The machine is loaned to users on payment of a deposit, and is kept in order free of charge, and supplies of wire are obtainable as needed. Further particulars are obtainable from Messrs. James Henty and Co., Henty House, 499 Little Collins-street, Melbourne. Phone Nos. 3, 4, or 5.

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PATENT ATTORNEY

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MELBOURNE.

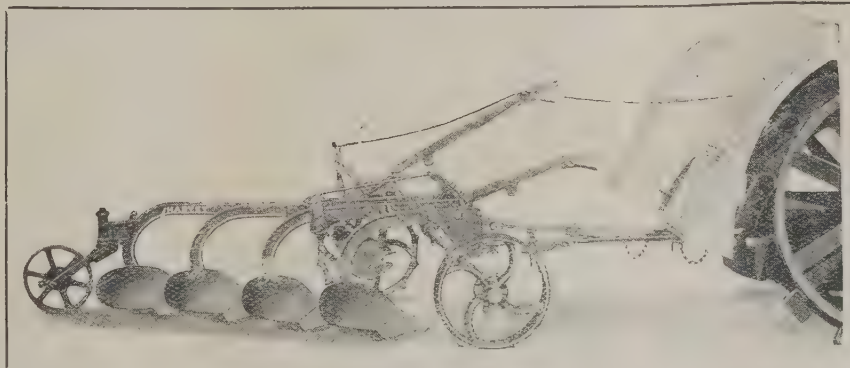
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### Power-lift Tractor Plows and Cultivators

Specially designed and manufactured to suit the "Fordson" and other higher power tractors

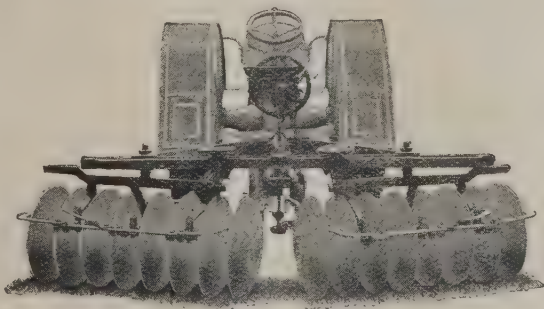
Easy  
to  
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**MODEL B 7.** "Harvey's" 4-furrow Power-lift Mouldboard Tractor Plow for "Fordson" use. Can be had in sizes 3 to 5 furrows. A popular plow with vigneron and orchardists. The 4 furrows can be reduced to 3 furrows, or vice versa.

## "HARVEY'S" Rigid Tyne and Disc Cultivators



"Harvey" Two-way Power-shift Reversible Disc Cultivator for "Fordson" use

Made in sizes from 12 to 16 plates. These can also be had in Tandem Models, in sizes from 20 to 32 plates, reversible if required, or can be reduced to two-way machines

"Harvey" Light Rigid Tyne Cultivator. Automatic lift

Can also be had in Spring Tyne Models. Supplied in sizes 15-17 and 19 tynes, cutting 7 ft. 6 in., 8 ft. 6 in. and 9 ft. 6 in. We also manufacture heavy duty Power-lift Rigid Tyne Cultivators. Write for illustrations

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Tractor and Power Farm Implements

# D. HARVEY

TRACTOR IMPLEMENT MAKER  
BOX HILL, Melbourne, Aus.

AGENTS ALL STATES



# The Fruit Trade

## Market Reports and News Items

### REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS, Advertising in this Journal. NEW SOUTH WALES.

**Sydney.**  
Chilton, F., City Fruit Markets.  
Greenberg, S. & M., Fruit Markets.  
Louey Pang & Samuel Wong Ltd., Thomas St., Haymarket.  
Rule & Beavis, Fruit Exchange.

**Melbourne.**  
Fred. J. Andrews, 416 Little Collins St., Melbourne.  
Clifford Barnsbee, 323 Bourke St., Melbourne.  
Producers' Dist. Society, Western Market.  
Cave F., & Co., Melbourne.

H. G. Colomby, Temple Court, Little Collins St., Melbourne.  
Davis, J., Western Market.  
Dennys, Lascelles Ltd.  
Fruitgrowers' Depot, 471 Flinders Lane, Melbourne.  
Lister, G., Western Market.  
Millis, A., & Sons, Western Markets.  
Mills, J. B., & Co., Bank House, Bank Place, Melbourne.  
Mumford, J. G., 449 Flinders Lane.  
Pang & Co. Ltd., H. L. Little Bourke Street.  
Ross, J. W., Western Market.

**QUEENSLAND.**  
**Brisbane.**  
Barr, A. S., Fruit Exchange.  
Collard & Mackay, Fruit Exchange.  
Cooksley & Co., Fruit Exchange.  
Finlayson & Son, Fruit Exchange.  
Geeves, H. V., Fruit Exchange.  
Robsons Ltd., Fruit Exchange.  
W. J. Whitten & Co., Fruit Exchange.

**TASMANIA.**  
**Hobart.**  
Jones & Co. Ltd., H. Fruit Exporters.  
Peacock & Co., W. D., Fruit Exporters, and at London.

**Launceston.**  
Bender & Co. Pty. Ltd., 110 Elizabeth Street.

**NEW ZEALAND.**  
**Auckland.**  
Turners and Growers Ltd.

**Dunedin.**  
Co-operative Fruitgrowers' of Otago Ltd.  
Reilly's Central Produce Mart.

**GREAT BRITAIN.**  
**Bristol.**  
Bristol Fruit Brokers Ltd.

**Cardiff.**  
Connolly, Shaw & Co. (also Ireland).

**London.**  
M. Isaacs & Sons Ltd.  
Margeson & Co. Ltd., Covent Garden.  
Monro, Geo., Ltd., Covent Garden.  
T. J. Poupart Ltd., Covent Garden.  
Ridley, Houlding & Co., Covent Garden.

**Liverpool.**  
Swann & Co., 3 Salter's Hall Court.

**Enil.**  
London & North-Eastern Railway.  
White & Son Ltd.  
E. & J. Shaw.

**Coventry.**  
Boswell Bros. & Davis.

**Manchester.**  
Manchester Ship Canal: Australasian Representative, Capt. W. J. Wade, 8 Bridge St., Sydney, N.S.W.

**Glasgow.**  
Russell, Turnbull & Co.

### GERMANY.

**Bremen.**  
Fruchthandel, Gesellschaft.

**Hamburg.**  
Astheimer, P. H., & Son, Fruchthof.  
Lutten, J. H., & Co., Hamburg.  
Fruchthandel Gesellschaft, Fruchthof.  
Stier, Aug. Fruchthof, Kreuz J. B. Mills & Co., Bank House, Melbourne.  
Timon & Gerstenkorn.

**HOLLAND.**  
**Amsterdam & Rotterdam.**  
Algemeene Vruchten Import Maatschappij.

**DENMARK.**

**Copenhagen.**  
Kobenhavns Fugtauktioner.

### BRITISH MARKETS.

**London (8/10/26).**

Messrs. T. J. Poupart Ltd., Covent Garden, report trade a little more active. Consignments of Canadian, British Columbian and American Apples are increasing daily, and prices generally are lower. The arrival of three boats carrying South African Oranges has slightly affected values. Excellent Pears are arriving from Europe and California.

The average value of Apples shows a slight reduction, realising from 8/- to 16/-, second grade 4/- to 7/- per bushel; Cox's Orange Pippins 5/- to 10/- per dozen fruits, 1 bushels 10/- to 22/-. Pears, 4/- to 8/- half-bushel, extra special Comice 12/- per dozen in trays.

**Hull (8/10/26).**

Messrs T J Poupart (Hull) Ltd., 71 Humber-street, report that business has shown a slight improvement, and prices on the whole slightly advanced.

**Liverpool (13/10/26).**

Messrs J C Houghton & Co, 1 Temple Court, report important arrivals of American barrel and box Apples, the demand for Newtowns and Jonathans being satisfactory. Prices generally were lower.

Pears in general are in good request. Both barrels and boxes met with enquiry, though quality varies considerably.

South African Oranges came to hand in excellent condition, and of good quality, but prices were not entirely satisfactory. A further consignment of choice Californian realised fair prices. South African: Valencia Late: 96/126, 20/-, 22/6; 150/176, 21/6, 26/-; 200/288, 20/-, 26/-; Seedlings: 96/126, 20/-, 21/6; 150/176, 21/-, 26/-; 200/288, 20/-, 26/-; Californian: 96/126, 23/-, 28/6.

### AUSTRALASIAN MARKETS.

#### Victoria.

**Melbourne (22/11/26).**

The following were the ruling wholesale quotations at the Western Market:—Apples—Choice eating, 6/- to 12/-; choice cooking, 7/- to 10/-; Cherries, choice dark, 10/- to 14/-; choice light, 7/- to 10/-; Lemons, Victorian, 7/- to 8/-; Oranges, Victorian, 11/- to 13/-; Mildura, 13/- to 16/-; N.S.W., 10/- to 13/-; Navels, 15/- to 18/-; Passion-fruit, Victorian, 35/- to 40/-; Pineapples, Queens, 28/- to 32/-; Tomatoes, S.A., 23/- to 28/-; N.S.W., 21/- to 22/-; Cucumbers, 12/- to 20/-.

#### New South Wales.

**Sydney (24/11/26).**

Mr. F. Chilton, City Fruit Markets, Sydney, reports:—

Queensland Fruits:—Bananas, 12/- to 30/- per case; Pines, smooth leaf, 18/- to 26/- per case; Cucumbers, 8/- to 22/- per bushel case; Passions, 6/- to 15/- per half case.

N.S.W.—Bananas, 12/- to 30/- per case; Lemons, 5/- to 17/- per bush. case; Oranges, 4/- to 10/-; Valencia, 5/- to 13/-; Eating Apples, Granny Smith, 9/- to 21/-; Passions, 5/- to 18/- per half case; Plums, 3/- to 14/-; Peaches, 3/- to 18/-; Apricots, 2/- to 11/-; Cherries, 5/- to 11/- per quarter case; Gooseberries, 3/- to 7/-.

Victorian.—Apples, Yates, 6/- to 18/- per bushel case; Statesman, 6/- to 14/-; Pears, B.P., 12/- to 18/-.

South Aus.—Apples, R.B., 7/- to 16/- per bushel case; Statesman, 6/- to 14/-; Rokewood, 6/- to 13/-.

Tasmanian.—Apples, F.C., 6/- to 14/- per bushel case; C.P.M., 6/- to 17/-; Dem., 14/- to 20/-; S.T.P., 3/6 to 13/-.

Owing to the extremely dry conditions which have prevailed during the past few months, all choice lines of fruit are very scarce and dear. Supplies of Tasmanian Apples are falling off, and values increasing.

#### Tasmania.

**Hobart (20/11/26).**

Apples, Crofton Pearmain, choice, to 13/- case; fair to medium, 7/- to 11/-; Delicious, 2½ and 2½, to 12/6; medium, 7/6 to 9/6; Sturmers, choice, 7/- to 8/-; medium, 3/6 to 5/6; Democrats, choice, 14/- to 15/-.

#### South Australia.

**Adelaide (20/11/26).**

Apples, eating, 10/- to 12/- case; cooking, 8/- to 10/-; Apricots, 12/- per half case; Cherries, 14/- per half case; Lemons, 8/- to 9/- per case; Loquats, 8/- to 10/- per case; Oranges, common, 10/- per case; Navel 17/- case; Passion-fruit, 55/- to 60/- per case.

**Queensland.****Brisbane (19/11/26).**

Lemons, prime, 5/- to 6/6; others, 4/- to 5/- a quarter case; Pineapples, smooth leaf, prime, 20/- to 21/-; others, 16/- to 20/- a case; 6/- to 12/- a doz.; rough leaf, 4/- to 12/6 a doz.; 13/- to 15/- a case; Passion-fruit, 6/- to 12/- a half bushel case; Peaches, 5/- to 7/6 a tray, 13/- a half bushel case; Apricots, 14/9 a half bushel.

**Western Australia.****Perth (13/11/26).**

Apples, Granny Smith, prime dumps, 25/6; others, 20/- to 22/-; Yates, prime dumps, 18/- to 23/3; others, 14/- to 16/6; Rokewoods, dumps, 17/- to 23/-; Democrats, dumps, 17/- to 22/-; Chandler's, dumps, 15/- to 20/-; Oranges, Navel, dumps, 12/- to 16/-; flats, 8/- to 13/-; Lemons, flats, 8/- to 12/6; Passion-

fruit, quarter cases, 13/6 to 19/3; Cherries, 15/6 to 23/6 per tray.

**New Zealand.****Dunedin (5/11/26).**

Messrs. Reilly's Central Produce Mart report that the demand is for Oranges, choice Sturmer Apples, Tomatoes, and Green Gooseberries. We have landing 2,000 cases Oranges, Grapes, Canadian Apples, Bananas, and Pineapples. Prices: Pears, choice Winter Nelis 6d., cooking 3d.; Apples, Delicious, to 12/6; Sturmers, to 10/6; Dougherty's, to 12/6; other desserts, to 7/6; Democrats, to 12/6; choice cookers, to 8/6; Canadian McIntosh Reds, 19/-; Lemons, choice Californians, 300/360's, Festive brand, 3/-, 4/-; Mission, 36/-; Oranges, Sydney Valencias, 20/-, 22/-; Adelaide, 22/6; Bananas, ripe, 35/-; Green Suvas, 30/-; Raratongan, 25/-; Grapes, Californians, 31/-, all at per case.

being received through such other ports as Hull, etc.).

As against these proportions, the Australian figures for 1925, read as follows:—London, 72.7 per cent.; Liverpool, 15.5 per cent.; Hull, 11.5 per cent.

The New Zealand figures were:—London, 97 per cent.; Glasgow, 3 per cent.

These figures plainly show that Australia and New Zealand greatly overloaded London in comparison with other ports, and it is clear that if exporters wish to improve their results they will have to remedy this disproportion. It is well known that generally an overloaded market is the selling basis on which the parity of other markets is based, even if such other markets are under-supplied.

**Fresh Outlets.**—Australian exporters would be well advised to make regular direct shipments to Glasgow, Bristol and Cardiff, all of which distributive ports serve very large communities within comparatively small areas. Direct shipments can also be profitably extended to Copenhagen and Amsterdam or Rotterdam.

**Improved Marketing.**—An additional means whereby exporters can improve their results, is by marketing their fruit through the Federated Auction Brokers at each port of arrival. By doing so, they will increase the buying competition, and bring about the "orderly" and "organised" marketing so much spoken of in Australia.

**Prospects for Coming Season.**—It is impossible at this stage, to forecast the prospects for the coming Australian season, but it can be said that despite the industrial crisis, the fruit trade in England is very healthy. South African, Californian and Argentine Oranges; Spanish and Portuguese Grapes; Italian Lemons, and American Pears and Apples have for weeks past been selling at excellent figures.

**AUSTRALIAN APPLE EXPORT.****Retrospect and Prospect.****Export Conditions Favorable.****Improvements Possible Without Control Board.**

On the eve of a fresh export season, it is opportune to review the immediate past, and to consider how exporters can profit by the experience gained last season, states Mr. H. G. Colombie, Temple Court, Melbourne.

The factors which detrimentally affected the 1926 results, can be recapitulated as follows:—

(1) The arsenic scare in U.K. (2) The general strike and prolonged miners' strike in U.K. (3) The unsatisfactory and disproportionate distribution of the unusually heavy exports from Australia, Tasmania and New Zealand. (4) The abnormal proportion of small-sized fruit. (5) The preponderance of unsuitable varieties.

**Arsenic.**—There will hardly be any recurrence of this scare in England,

especially since America, which was the country most affected, is this year taking effective measures to ensure that all Apples exported to Great Britain will conform to U.K. regulations.

**Strike.**—As the miners' strike is now settled, and as it is not likely that another general strike will take place in England for a long time, if ever at all, the marketing of the 1927 crop of Australian Apples can reasonably be expected to be free from these disturbing factors.

**Better Distribution Needed.**—Australian exporters have it, to a large measure, in their own power to further improve the marketing of their Apples and their returns by a better distribution of their exports.

In the fruit report recently issued by the Imperial Economic Committee, it is recorded that during 1924, about 20,000,000 bushels of Apples were imported in U.K., of which 67 per cent. was received through three ports, viz., Liverpool, 29.4 per cent.; London, 25.7 per cent.; Glasgow, 11.7 per cent. (the balance of 33 per cent.

**FRUIT SHIPMENTS — TO NEW ZEALAND****REILLY'S CENTRAL PRODUCE MART LTD., DUNEDIN**

advise Growers of CHOICE FRUITS to ship to Dunedin

**REILLY'S** anticipate a keen demand for all lines of choice Fruit arriving on this market between the months of July and December.

**REILLY'S** offer Fruitgrowers their faithful service and will be pleased to advise Fruit Shippers the probable prices available and prospects of making suitable sales.

Cable or write to **Reilly's, Dunedin.** Codes used—BENTLEY'S, MARCONI'S, WESTERN UNION, A B C 5th & 6th Ed.

**REILLY'S GUARANTEE FAITHFUL SERVICE TO ALL CONSIGNORS.**



# Western Australia.

The State's Progress :: News and Notes :: Seasonal Work

## Seasonal Work for December.

### Continue cultivation.

Complete the work of thinning out Apples and Pears.

Carry on the war against Fruit Fly.

Take special notice of, and report at once, everything that resembles Codlin Moth or its larvae.

Spray for Orange Aphis where necessary. The heat of summer will, no doubt, have a checking influence on the pest this month, and spraying may not be necessary, but where needed it is false economy not to apply it.

Marketing will be the principal work in the stone fruit orchards this month, and the better the fruit is graded and packed, the better will be the prices obtained. Grade evenly, and never mix small and large fruit in one case; and never send to market very inferior fruit, which depresses prices of good fruit, causes gluts, and robs the pigs which should be kept on the orchard of their just dues. It is very, very rare indeed that a glut of really good fruit occurs, but there is always a very limited market for rubbish. — Geo. W. Wickens, Superintendent of Horticulture, in the "Journal of Agriculture."

## ALBANY FRUITGROWERS' LOSSES.

Fruitgrowers in the Albany district have just experienced the most disastrous export season on record. Of the seven shipments of fruit to leave here this year (says the Albany "Advertiser"), but one, and that was sent to Germany, yielded profitable returns. The other six went to England and showed a loss. The first landed when the market was over supplied from America and the remainder were affected by the strike or the congestion in business arising from it. At least four of the cargoes arrived in poor condition. On top of this the Commissioner of Railways has arbitrarily exacted the increased charge for the carriage of the timber used in making the cases in which the fruit was carried. The additional charge only amounts to one penny per case, but as approximately 15,000 cases of Apples grown in the immediate district were shipped, the sum local growers will unexpectedly have to find is £62/10/-. That total is split up into several por-

tions, but even so the imposition falls heavily on men whose resources have already been strained through the absence of revenue they had every right to expect.

## BRIDGETOWN COOL STORE.

Fruit loading operations at the Westralian Farmers' Cool Store, at Bridgetown, W.A., were inspected early in November by a representative of the "Blackwood Times," who stated that it was pleasing indeed to see the Apples open in such splendid condition. The lines opened for inspection were Grannies, Rokewood, Yates and Democrat. The first-men-

# T.J. POUPART

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Covent Garden, London, W.C.2

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The Premier Firm of Fruit Salesmen in Great Britain

Sale by Private Treaty only (Gives best results)

Commission the exclusive basis (purchase propositions cannot be considered)

Advances offered to cover freight and accessory charges

Victorian Representative:

FRED. J. ANDREW

416 Little Collins Street, Melbourne

tioned were just as green and fresh looking as the day they left the tree, while the whole of the Apples unwrapped for view were fresh looking, and as firm as when they entered the store. Particularly good prices are being obtained for Apples ex this store. Fruitgrowers are beginning to realise what a local cool store means to them.

## ELECTROCULTURE AND FRUIT GROWING.

One of Bridgetown's (W.A.) most progressive orchardists (Mr. H. Lake) recently installed electroculture plants on six rows of trees in his orchard. The cost is not heavy, and the experiment is being watched with considerable local interest.

## PROGRESS IN WESTERN AUSTRALIA.

The annual report of the Department of Agriculture for the year ending June 30 last, stated that there was a brighter outlook in all branches of fruit production. The Apple export season had not been entirely satisfactory, owing to the general strike in England, but it was gratifying to know that Western Australian Apples were in greater demand, and that the prices realised were better than those received by other States.

A slight outbreak of codlin moth had occurred during the year, but was under control. The worst attack of fruit-fly known for a considerable time had taken place. The Plant diseases Act enabled the Department to take action against fruitgrowers who failed to keep their fruit free of the pest. By a continuance in the coming season of the campaign against the fly it was believed that the ravages of the pest would be considerably reduced.

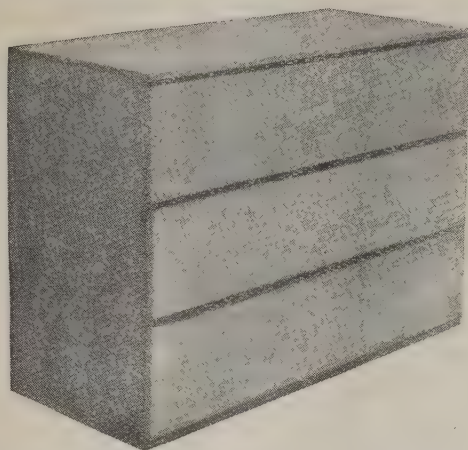
Reports from other sources indicate that there is every prospect of a very heavy yield, and prices are likely to be moderate. The only fruits for sale on November 16, stated the "West Australian," were cold storage Apples, which were selling at a high price, the earliest stone fruits, which were not of a high quality, and Cherries, which were being bought at the wholesale price of from 1/6 to 2/- per pound.

Local Tomatoes were just coming in. Strawberries were later than usual this year, as there was no first crop from the Bullsbrook district, owing to floods. They were selling at about 12/- per dozen. There is every prospect of plenty of cheap Apricots for the Christmas markets.

## BRIDGETOWN FRUITGROWERS' ASSOCIATION.

At the monthly meeting, held on October 15, Rev. F. Davis presiding, it was reported that the Fruit Shippers' Committee had taken up the question of the increased freight on shooks, but they doubted if there was much chance of reduction.

Letters were received from Mr. Booth, of Mt. Barker, and the W.A. Fruitgrowers' Association, re the Marketing Bill before the House, which they were pledged to support. It was decided on the motion of Mr. O. Sparks that the Association support the Bill, and endeavor to have a trust of five with two representatives of the producers, or one representative in a trust of three.



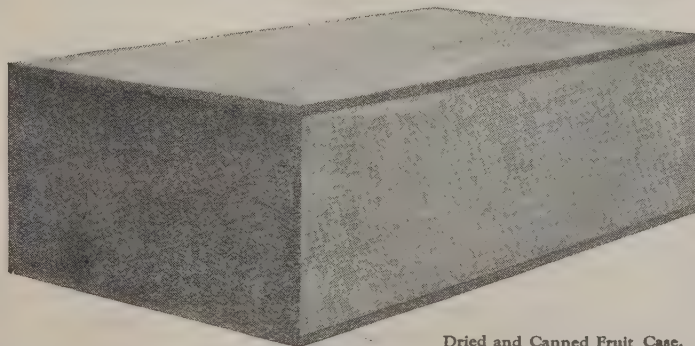
Australian Apple and Citrus Dump Bushel Case.

## SOME ADVANTAGES IN FAVOR OF IMPORTED CASES

- (1) Full drawback of duty allowed on all cases exported.
- (2) 1/3rd less freight than on Hardwood cases.
- (3) 25% rebate on rail freight for full trucks.
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- (5) Every piece of timber fit and ready for use, thereby eliminating waste.
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Dried and Canned Fruit Case.

## SOFTWOOD CASES

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*Cheaper than hardwood if exported.*

*Cut to Australian Standard Sizes*

DUMP BUSHEL with one piece top and three equal piece side

UPRIGHT BUSHEL with one piece top and three equal piece side

DRIED FRUIT CASE with one piece side and two equal pieces tops and bottoms

CANNED FRUIT with one piece side and two piece tops and bottoms



Upright Bushel Case with Centre Partition.

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ADELAIDE



## The Fruits of Australia

**S**OME INTERESTING FIGURES regarding the fruit industry of Australia were given by Mr. J. M. Ward, Victorian Superintendent of Horticulture, in a lecture delivered to teachers recently at the Burnley School of Horticulture. Illustrating his remarks with attractive lantern slides, the lecturer showed that every fruit known to civilisation may be grown satisfactorily in some part of the Australian continent, and all the more important fruits are grown commercially.

In Australia, as a whole, over 270,000 acres are devoted to fruit-growing, representing an annual income of approximately £17,000,000. Tropical fruits are supplied mostly by Queensland, and include, besides Bananas and Pineapples, the less well-known Papaws, Custard Apples, Granadilloes, Date Palms, and Coconuts. Loquats, Figs, and Passion-fruit may be grown from Queensland right down to the cooler temperate parts of Victoria and South Australia. During the year 1924-25 Australia produced 1,939,000 bushels of Bananas from 15,000 acres, worth £831,000; 978,000 dozen Pineapples from 3,771 acres, worth £270,000; 73,000 dozen Papaws from 341 acres, worth

£14,000; 28,000 bus. of Custard Apples from 284 acres, worth £15,000; 110,000 bushels Passion-fruit from 536 acres, worth £86,000. It is stated that there is a keen demand from America for Passion-fruit in bottled form, and there are great possibilities for expansion of the trade in this direction.

### The Citrus industry

is well established in Australia, over 3,000,000 bushels of Oranges, and 497,000 bushels of Lemons, worth respectively £1,294,000 and £151,000, being produced from some 52,000 acres. But there is still much room for expansion. For years quantities of Lemons have been imported annually from the Mediterranean countries; yet Australia—Victoria, in particular—can produce Lemons equal in quality to any in the world. Greater care is needed in storing Lemons to supply the market during hot weather, when prices are good.

The Orange industry ranks next to Apples in quantity produced; yet we are eating less than half an Orange per day per head of the population. Export is still in the experimental stages, and no Oranges were exported from Victoria last season; yet Australian Oranges have a remarkably good name on the London market, and Vic-

torian growers have taken prizes against all parts of the world. New South Wales is the largest Orange-producing State.

One trouble citrus growers have to contend with is the lack of bud selection in the propagation of Citrus trees. Buds from selected consistent-bearing trees of the right type will do much to increase the yield. Nurserymen should give greater attention to this matter.

Among vine fruits the principal varieties grown are the Zante Currant and Sultana (used almost solely as dried fruit), Waltham Cross (used both fresh and as Raisins), table and wine Grapes. The quality of Australian-grown Sultanans and Currants is said to be superior to the Californian fruit.

### Peaches

are grown both for canning and as fresh fruit. In 1924-25 season some 27,000 acres in Australia produced over 2,000,000 bushels, worth £682,000. Owing to the keenness of grading, our canned fruit exported is of the highest quality, more than equal to the Californian product. Victoria is the largest Peach-growing State, producing nearly a million cases from 12,000 acres. As with most of our fruits, the locally-raised varieties are

## FRUIT WRAPPING PAPER

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wrapping export fruit.

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Head Office and Wool Stores at Geelong.

*Exporters of Fresh and Dried Fruit to England and the Continent  
also Citrus Fruit to New Zealand*

Personal Supervision of all Consignments at Port of Shipment. Prompt Returns.

**AGENTS FOR AMERICAN FRUIT WRAPPING PAPER**

**CARO AND CARONITE WRAPPERS**

have proved to be preventives against Apple Scald and other diseases which develop in Cool Store or Refrigerator on both Citrus and other fruits.

We also supply Sulphite Paper, Woodwool, Cases (Hardwood or Canadian), Nails, etc., in large or small quantities.

proving superior for our particular conditions to those introduced from elsewhere. What we need now is a variety which will come in just a little earlier than the Pullars, to spread the canning season over a longer period, and fill the gap after the Apricots are over. There are two or three varieties which would be suitable, but unfortunately, they are not good crops.

Peaches for eating purposes are mostly grown just around the metropolitan area. Owing to canners refusing to take the Elberta, the 800 odd tons growing in Victoria, and 600 tons in New South Wales, have to be disposed of fresh, hence the necessity for advertising, such as in "Peach Week." Growers are gradually eliminating this variety.

#### Other Soft Fruits.

Australia produces some 175,000 bushels of **Cherries** from 6,500 acres, of which Victoria's share is 51,000 bushels from 2,500 acres.

There are 14,000 acres of **Apricots** in Australia, producing nearly one million bushels, worth £300,000. Here again there is great need for bud selection, and selection of the right variety and right type. The Moorpark, a very fine quality fruit, is not profitable to grow in the Goulburn Valley for canning purposes; selection is needed to get a better yielding type for each district—the Moorpark yields well in Tasmania, for instance. The lecturer mentioned trees of this variety in Tasmania which yielded 8 to 10 bushels per tree year in and year out; trees of the same variety in the Goulburn Valley bore only 1 to 2 bushels.

Of **Plums**, nearly 19,000 acres produce a million cases, valued at £283,000. This includes Prunes. The Golden Drop Plum, although used extensively for drying, is not a Prune. Japanese Plums are also largely grown, but are of poor quality when

compared with the European type. It is expected that during the next four years the production of Prunes will be just about trebled. For the time being production has just about overtaken the demand; yet we are still importing Prunes from other parts of the world. More propaganda is needed to increase the consumption.

#### Berries.

The **Strawberry** does very well in cold districts of Tasmania, and remarkably well in Queensland, and in many districts in between. The Queensland Strawberry ripens in May, June and July, in the south from November onwards. Queensland puts up her Strawberries for sale as well as it is done anywhere. The double row system of growing is adopted. The Australian production of Strawberries is nearly 15,000 cwt. from 620 acres, worth £97,000.

**Raspberries** are grown chiefly in Tasmania, which produces 3,000 or 4,000 tons, and Victoria about 100 tons. The area under Raspberries in Australia is 1,700 acres, the 45,000 cwt. from which is worth £76,000. In Tasmania there are Raspberry beds 30 to 40 years old, and still doing remarkably well. The fruit is mostly used for jam or pulp.

The **Loganberry** has come into favour of recent years, but Tasmania and Victoria are practically the only States growing this fruit commercially. In America thousands of tons are made into Loganberry juice and used as a cordial; they are also sold fresh. Here the fruit is mostly used for jam.

#### Pears.

Among the important commercial fruits are Pears, in which Victoria excels. The Australian production from 22,000 acres is 1,600,000 bushels, valued at £403,000. Of this, Victoria produces over 900,000 bushels from 12,000 acres, worth last year £190,000.

In the Goulburn Valley we grow one jam-making.

of the finest canning Pears than can be produced anywhere—the W.B.C., which is superior to the Californian canned Pear.

#### Apples.

of course, form the most important part of the fruitgrowing industry of Australia. The production last year, from nearly 100,000 acres, was 6½ million bushels, worth £2,380,000. Of this Victoria's share was 2½ million bushels from 25,000 acres, worth £651,000. Of the total production, about 3 million bushels were exported, which leaves us just about half an Apple per day per head of the population. If Australians would only use one Apple per day each, and we still shipped the same quantity, there would be room for a production of something like 12 million bushels, instead of 6. In Tasmania many thousands of acres of Apples have been cut out and replaced with hops; still, our production is increasing, but not to any great extent. The area under Apples in Victoria is not increasing. We should push the sale of Apples in Australia, and with better marketing methods, it will be easy to increase production.

A picture was shown of the oldest Apple trees in Australia; they were planted at the head of the Tamar (Northern Tasmania) by Lady Franklin, wife of the then Governor, Sir John Franklin, something like 100 years ago. One tree is two feet through the trunk. For the last 20 years they have not been pruned or cultivated, and yet they are still bearing well.

Among the lesser grown fruits are the **Persimmon**, which is grown chiefly around Adelaide, **Black and Red Currants**, and the **Gooseberry**. In Queensland and parts of Western Australia **Cape Gooseberry** grows almost like a weed, and is a very valuable fruit for

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## USEFUL MAKESHIFTS.

The following useful hints are extracted from a bulletin entitled "Makeshifts," issued by the New Settlers' League of Australia.

## Stepladder.

The following timber is required to build a pair of house steps:—A slab of timber about 15 in. by 10 in. for the top; two lengths of 6 in. by 1 in. timber for the front legs and the steps (the amount of timber used varying with the height of the steps and the number of steps), two lengths of 4 in. by 1 in. timber for the back legs, one 15 in. length of 2 in. by 2 in. (to which the top is secured, and into which the front legs are nicked), and two pieces of 3 in. by 1 in. timber about 15 in. long. One of these is nailed to the back of the front legs near the top to prevent the steps from spreading by catching on the piece of 2 in. by 2 in. timber; the other length is nailed across the bottom of the back legs. The steps are cut from the 6 in. by 1 in. timber. About 3 in. from the top of the front legs bore a hole and connect it with the back legs by a bolt. The back legs must be further apart than the front to allow the steps to close up.

## Wheelbarrow.

A barrow with 18 in. wheel requires

two 5 ft. 6 in. lengths of 2 in. by 2 in., or 3 in. by 2 in. sawn or adzed timber for frame and handles. About 4 in. from wheel-end, nail a block of 9 in. by 6 in. by 2 in. timber, and bore a hole in centre for axle of wheel. About 18 in. from wheel-end nail a three-cornered solid brace for front board. A foot from handle-end nick a 12 in. length of 3 in. by 2 in. into frame for legs and put a solid brace each side. Width of barrow at front board about 14 in. and at legs 21 in. Nail palings or other timber across frame for floor. Front piece may be any height. If barrow is required for cleaning stables, the legs should be continued several inches above the floor and a length to correspond near front piece. Nail palings along sides, which, though straight will answer as well as sloping sides, which are difficult to make.

## ALMOND WIND-BREAKS.

The nut-crop is commencing to interest South African planters, and in addition to Almond windbreaks some areas are plumping for Almonds as an acreage crop, says the "S.A. Fruit-grower."

On account of its hardness the Almond is a very suitable tree for wind-break planting, and unless on excessively rich or heavily irrigated land it escapes the gumming to which some of our stone fruits are so susceptible (notably Apricots, and to a lesser degree Peaches).

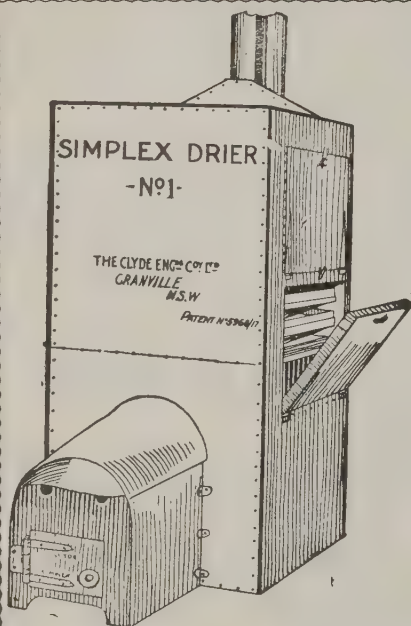
Rustenburg area is considerably interested; and in the Almond there is healthy promise of an exportable product which may rank as a profit-line from planters who could not seriously lay down deciduous or Citrus fruits.

Another wind-break-tree which can profitably be developed is the Fig, where Figs can be grown and successfully sundried.

These two lines could supplant the gums and cypresses which have hitherto been our main windbreak plantings (to great impoverishment of the ground and much subsequent trouble where they are found too close to fruit tree lines to handle satisfactorily when their great growth demands removal).



GIBBS, BRIGHT & CO.—See Page IV



# The Clyde Simplex Driers

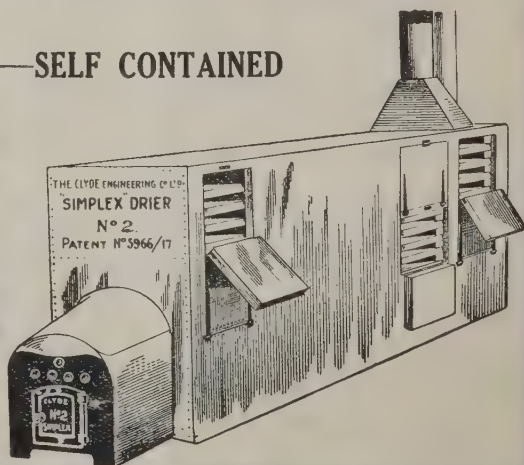
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## MANURING OF VINES.

## The Function of Phosphoric Acid.

Whereas potash and nitrogen are of more particular benefit to the fruit and vegetation respectively, phosphoric acid appears to be more general in its influence upon the vine. It conduces towards the general health of the vine, and is said to have an important influence upon the ripening of the wood.

Australian soils generally are deficient in phosphates, and so far as artificial manures are concerned, all results up to the present time indicate that phosphoric acid is the most necessary food, says the N.S.W. Department of Agriculture. Phosphatic manures are readily obtainable at a comparatively cheap rate, and the only difficulty would appear to lie in the mode of application, a question which depends upon the nature of the soil.

It has been demonstrated that soils of a heavy nature have the power of retaining phosphoric acid in the sur-

face, and therefore, in such soils, it is preferable to place the phosphate as deep down as can conveniently be done. This can be accomplished by distributing it in the bottom of the plough furrows and covering. In the lighter soils of a sandy or gravelly nature, more particularly upon irrigated lands, it appears to be sufficient that the manure is drilled in upon the cultivated soil, which affords free percolation. It is in the lighter soils that phosphatic manures have given the quickest and best results so far, and, particularly where irrigation is practised, beneficial results should follow their application.

For general conditions superphosphate is most suitable, and may be used at the rate of 2 to 4 cwt. per acre. It is rapid in its action, and easily applied. For moist conditions, bone-dust is good, as being of a less active and more lasting nature.

## BITTER PIT IN APPLES.

In reply to a query as to why bitter pit is more subject in Cleopatra

Apples than any other variety, Mr. George Quinn (Government Horticultural Instructor), at the annual conference of the southern branches of the South Australian Agricultural Bureau held at Finnis on August 25, said:—

"The Cleopatra Apple is not more subject to bitter pit than any other sorts, but amongst the few most favored sorts grown in this State it is more noticeably susceptible. Why this is so has not been discovered. That bitter pitting arises from groups of cells in the pulp perishing has been established, but why they perish is not fully understood, neither has any unfailing method of prevention been found. It is generally believed, however, that if trees of the varieties whose fruits are affected by this defect are not pruned severely after they came into bearing, and are permitted to fruit on long laterals, there is less pitting in such fruits. Further, that if the growth of the tree and fruit be stimulated by heavy rains or irrigations in summer, and the trees flushed with sap in that manner, the fruit they are carrying has a tendency to develop bitter pit. These are the most consistent observations yet established, but they are not wholly so. The only suggestion in respect to methods of prevention which have been made thus far tend to show that the above, combined with attention to good tillage, and regulating, as far as possible, the supply of moisture and plant food in the soil, are calculated to exercise some restraint on its occurrence."—"Garden and Field."



# Why be satisfied with dwarfs and culls

Protect your fruit and rid your orchard and garden of Aphis and similar destructive insects at a cost of only a few cents a tree. "Black Leaf 40," the "Old Reliable" nicotine spray, is recommended by Agricultural Colleges and Experiment Stations. Spray singly or in combination with solutions for scale, codling moth and other orchard pests.

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## GETTING MORE OUT OF FARM LIFE.

Mr. E. H. Hurlbaeus, writing in the "Florida Grower," makes some suggestions which are equally applicable in Australia. He says:—

During the writer's five years experience in Citrus field work many groves were visited, and one of the curious things noted was that in a great number of cases there were neither cows, chickens, pigs, nor garden or novelty orchard to be seen.

It is granted that on some groves there is no suitable land for such purposes. On many others, however, there is a strip of lower land around a lake, a bay head or a corner that is not in use. Why not keep a cow, a flock of chickens, possibly fatten one or two pigs and raise a garden, wherever practicable? There are many grove owners who depend on the town supplies as much as though they were apartment dwellers. A large part of this outlay might be saved to the advantage of the pocket books, the health, and the peace of mind of many

growers, if they lived at home on homegrown stuff as far as practicable.

Something can be grown in a vegetable garden here the year around.

Another thing which has been greatly neglected in Florida plantings is the novelty orchard. The range of tree and bush fruits available to growers.

To detail the possibilities would require an article in itself, but to touch a few high spots the following might be mentioned:—Avocados, Mangos, Peaches, Plums, Persimmons, Papaws, Guavas, Sand Pears, Loquats, Pomegranates, Figs, and many others. All of these except perhaps the Fig could be planted in the same grove form as the Citrus planting, and so handled with very little extra attention, receiving the bulk of their care during the grove operations. Figs will almost take care of themselves if planted against a building so that the roots may run under and so be protected from rootknot.

Why not live at home and board there too?

## THE SCARECROW.

The scarecrow stands with out-stretched hands amid the waving corn, He does not walk, he cannot talk, his clothes are old and worn. He does not seem to mind the wind, the snow, or falling rain, As all day long he keeps the birds from off the golden grain.

He never eats, he never sleeps, you never see him yawn; From day to day and week by week he stands above the corn. The sweetest song the birds may sing does not appeal to him, He has no ear for music, for he's just a spectre grim.

He's such a faithful servant, and how well his master knows He never will forsake his place while there are any crows. He never grumbles at the hours he's there from early morn, To scare away the hungry birds from off the ripe'n'ing corn.

Another time you'll find him standing in the cherry tree, A guarding that delicious fruit that's grown for you and me; Or perhaps they've put him down below to mind the Currants red; Or lower still to chase the birds that love the Strawberry bed.

He never list's to lovers' yarns, nor makes those goo goo eyes; No matter what the weather's like he does not mind the flies; He does not fear the sting of wasp, or gnat, or bumble bee, He's proof against their venom, 'cos he's just a bit of tree.

G. Phillips.

## The Parting Shot.

A minister in a certain town in Alabama took permanent leave of his congregation in the following manner:—

"Brothers and sisters, I come to say good-bye. I don't think God loves this church, because none of you ever die. I don't think you love each other, because I never marry any of you. I don't think you love me, because you have not paid my salary. Your donations are moldy fruit and wormy Apples, and 'by their fruits ye shall know them."

"Brethren, I am going away to a better place. I have been called to be chaplain of a penitentiary. 'Where I go ye cannot come, but I go to prepare a place for you,' and may the Lord have mercy on your souls. Good-bye."

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South Aust.: Messrs. Geo. Selth & McRae Ltd., Adelaide.

Tasmania: Messrs. E. R. Cottier & Co., Hobart.

## THE DRIED FRUIT TRADE OF LIVERPOOL.

"Before the war and right up to the end of 1914, Liverpool held the first position as being the largest importer of the most important of the dried fruits, viz., Currants, the gross tonnage of which to Liverpool in the year 1914, was 32,837 tons, whilst London fell short of this figure by 1,049 tons," states Mr. H. W. Garrod, President, Liverpool Dried Fruit Trade Association, in a recent issue of the London "Chamber of Commerce Journal."

Since the war, this position has been reversed, owing to the disparity of freights from the Mediterranean. Colonial fruit, more especially Australian, is gathering strength and favor amongst the consuming public of the United Kingdom, and the Liverpool Association has lately had the

opportunity of pointing out to those controlling shipments the absolute necessity of feeding the port of Liverpool with much larger direct shipments before they can reasonably expect to see any material increase in the demand. This is an important point, and colonial shippers are alive to the position, it being expected that Liverpool will see shipments here more in line with her immense distributing power.

The members of the trade in Liverpool are unanimous in their approval of the action of the Ministry of Health in stopping, after the end of this year, the bleaching (by sulphur dioxide) of dried fruits. Those with experience are satisfied that the British consumer will appreciate his fruit very much more in its natural state, and the non-sulphuring will help to increase the popularity of dried fruit as a food.

## Answer to Correspondent.

### QUANTITIES OF SPRAY REQUIRED.

"Ignoramus," Melbourne, asks:—Would you kindly inform me how many averaged-sized Apple trees should be sprayed by a vat holding 75 gals., presuming the spraying to be properly done, or how many vats would be needed for 1,500 trees in full leaf?

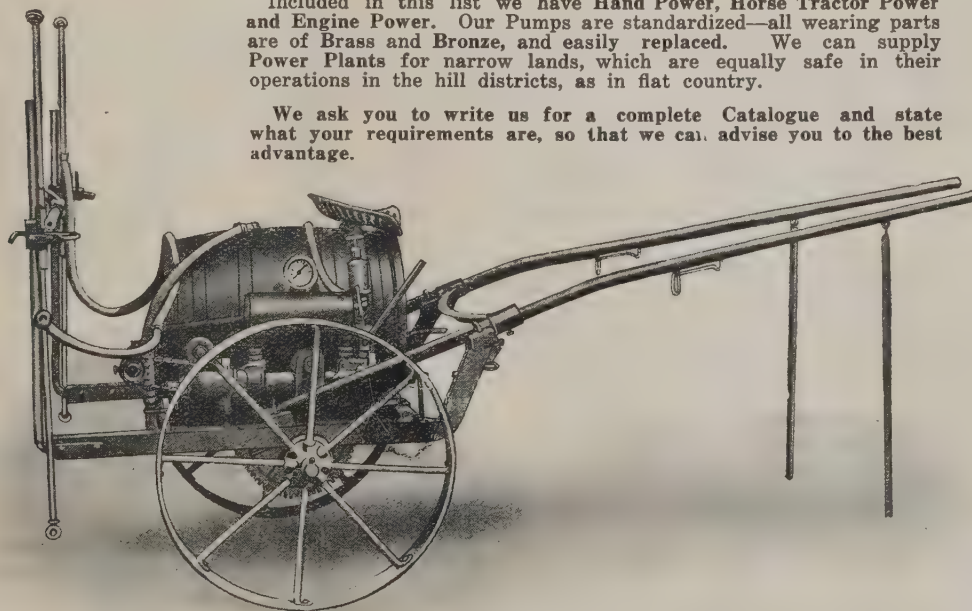
Answer (by A. F. Thiele, Doncaster):—I would say the spraying depends on what he is spraying for, whether winter or summer spraying, and for what sort of disease, also on the weather. In windy weather he will have to use more material than in calm weather to do his trees thoroughly, but I should think about between 40 and 60 trees would be about an average to the 75 gals.

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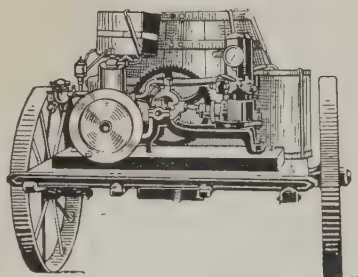
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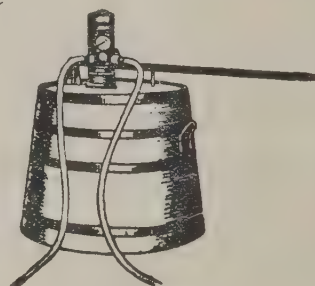
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